PONY

2025

ICT

نسخة مجانية
غير مخصصة للبيع

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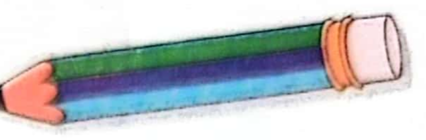
FIRST TERM

1st Preparatory





Introduction



We are delighted to introduce our comprehensive educational series "Pony" in ICT. We designed this book with an interesting and attractive style to capture your attention and keep you engaged throughout your learning journey.

We understand that learning can be challenging, which is why we have made every effort to provide clear and concise explanations of the topics covered in this book. In addition, the book includes a large number of comprehensive exercises designed to help reinforce your understanding of the concepts presented.

We have also taken great care to provide explanatory information for some of the more ambiguous points in the subject matter. We understand that some concepts may be difficult to grasp, and we have made every effort to provide clear explanations and examples to help you understand these points.

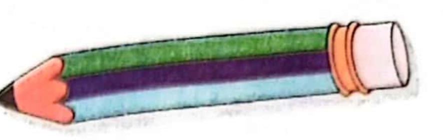
Overall, we hope that this book will help you develop a strong foundation in ICT and explore its exciting world.

We hope that you find this book informative, engaging, and enjoyable to read.

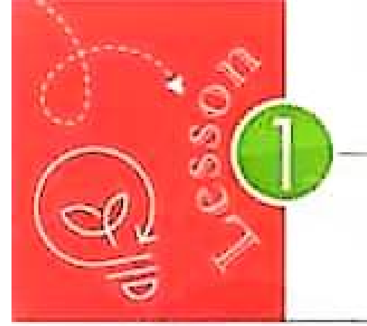
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Contents



Chapter One Digital Programs and Applications



Green Technology

Green Technology

- It is based on technological tools that help protect the environment rather than causing harm and optimize the use of its resources.
- Sometimes referred to as "Sustainable Technology" or "Clean Technology,"

• التكنولوجيا الخضراء:

تقوم فكرة التكنولوجيا الخضراء على الاعتماد على الأدوات التكنولوجية التي تساهم في الحفاظ على البيئة بدلًا من التسبب في ضررها وترشيد الاستهلاك لمواردها.

• يطلق عليها في بعض الأحيان (التكنولوجيا المستدامة أو التكنولوجيا النظيفة).

Electric Vehicles in Egypt

» Electric vehicles are being used recently in Egypt instead of fuel-powered cars to:
- decrease the emission of harmful substances from car exhausts.
- minimize fuel consumption.

» Electric cars operate using batteries and come with a charging station enabling connection to an external power source for recharging.

« اهتمت مصر في الفترة الأخيرة باستخدام السيارات الكهربائية بديلًا عن السيارات التي تعمل بالوقود؛ من أجل:

• تقليل نسبة الانبعاثات الضارة من عوادم السيارات. • تقليل نسبة استخدام الوقود.

« تعمل السيارات الكهربائية بالبطاريات، فهي مزودة بمكان للشحن يسمح بتوصيل السيارة بمصدر خارجي للكهرباء للقيام بالشحن.



Fields of Using of Green Technology
مجالات استخدام التكنولوجيا الخضراء

① Renewable energy:



- **Solar Energy:** Uses solar panels to convert sunlight into electricity.
- **Wind Power:** Uses wind turbines to produce electricity from air movement.
- **Hydropower:** Uses dams to generate electricity from water movement.
- **Geothermal Energy:** Uses the earth's internal heat to generate electricity.
- **Bio Energy:** Uses organic materials, such as soybeans and corn to generate energy.

الطاقة المتجددة:

- طاقة الشمس: تستخدم الألواح الشمسية لتحويل ضوء الشمس إلى كهرباء.
- طاقة الرياح: تستخدم توربينات الرياح لتوليد الكهرباء من حركة الهواء.
- الطاقة المائية: تستخدم السدود لتوليد الكهرباء من حركة الماء.
- الطاقة الحرارية الأرضية: تستخدم حرارة باطن الأرض لتوليد الكهرباء.
- الطاقة الحيوية: تستخدم المواد العضوية مثل: نباتات الصويا والذرة لتوليد الطاقة.

② Rationalization of energy consumption and responsible utilization:

- **Green Buildings:** The design and construction of buildings using eco-friendly, energy-efficient materials while enhancing ventilation and insulation.
- Utilizing energy-efficient appliances and high-efficiency computers.
- **Smart Transportation:** Using electric vehicles to improve energy efficiency in the transportation sector.

ترشيد استهلاك الطاقة واستخدامها بشكل مسئول:

- المباني الخضراء: إنشاء وتصميم مبانٍ باستخدام مواد صديقة للبيئة وموفرة للطاقة وتحسين التهوية والعزل.
- استخدام أجهزة كهربائية موفرة للطاقة وأجهزة الكمبيوتر ذات الكفاءة العالية.
- النقل الذكي: استخدام المركبات الكهربائية لتحسين كفاءة استخدام الطاقة في قطاع النقل.



③ Waste recycling:

- The recycling of materials like paper, plastic, and metals into new products.
- Transforming organic waste into nutrients-rich compost to enhance soil fertility
- Reducing waste by reusing and repairing products.

إدارة النفايات:

- إعادة تدوير المواد القابلة لإعادة التدوير مثل الورق والبلاستيك والمعدن إلى منتجات جديدة.
- تحويل النفايات العضوية إلى سماد غني بالمغذيات لتحسين خصوبة التربة.
- تقليل كمية النفايات التي يتم إنتاجها من خلال إعادة الاستخدام وإصلاح المنتجات.

④ Water treatment:

- Purifying contaminated water to be reused or drunk.
- Utilizing smart, efficient irrigation systems like drip irrigation.
- Repairing water leaks and utilizing water-saving devices to rationalize water consumption

معالجة المياه:

- تنقية المياه الملوثة لإعادة استخدامها أو شربها. • استخدام أنظمة ريٍّ ذكية موفرة للمياه مثل الري بالتنقيط.
- إصلاح تسريبات المياه واستخدام أجهزة موفرة للمياه لترشيد استهلاكها.

Benefits of Green Technology

1 Preservation of the environment from climate change.

- The impact of vehicle emissions has raised the level of carbon dioxide in the atmosphere, intensifying global warming and resulting in environmental harm.
- This has prompted the development of transportation alternatives.
- **Electric cars**, which lessen this impact by lowering carbon dioxide levels and decreasing environmental pollution.

1 الحفاظ على البيئة من التغيرات المناخية:

- ساعد تأثير عادم السيارات على زيادة نسبة ثاني أكسيد الكربون في الغلاف الجوي وزيادة نسبة الاحتباس الحراري؛ مما أدى إلى حدوث أضرار بيئية، وقد أدى هذا إلى تطوير بدائل النقل.
- السيارات الكهربائية والتي تقلل هذا التأثير من خلال تقليل نسبة ثاني أكسيد الكربون في الجو وتقليل نسبة التلوث البيئي.

2 Resource Conservation (Water - Electricity)

Green technology aids in optimizing water and electricity usage through various means, including:

Body sensors:

- detect the presence of a hand under the tap and control the flow of water by turning the taps on/off.
- This technology can also optimize electricity usage in both residential and commercial settings by employing sensors to regulate lighting based on need.

Solar energy technology:

- relies on photovoltaic panels to convert solar energy into electrical energy and operate automatically when required.

2 الحفاظ على الموارد (المياه - الكهرباء)

يمكن للتكنولوجيا الخضراء أن تساعد في ترشيد استهلاك المياه والكهرباء من خلال العديد من الأمور منها:

أجهزة الاستشعار للأجسام:

- يتم من خلالها (تشغيل/ إيقاف) المياه في صنابير المياه نتيجة وجود الجسم (اليد) تحت الصنبور؛ مما يسمح بتدفق المياه وقت الحاجة إلى ذلك.
- كما يمكن ترشيد استهلاك الكهرباء داخل المنازل والشركات من خلال نفس فكرة الحساسات مع الأجسام؛ حيث يمكن (تشغيل/ إيقاف) المصابيح الكهربائية وقت الحاجة إلى ذلك.

تكنولوجيا الطاقة الشمسية:

- تعتمد على استخدام الألواح الضوئية وتحويلها إلى طاقة كهربائية، وتشغيلها آليًا وقت الحاجة.

Uses of Sensors

Sensors are used for many tasks, including:

استخدامات الحساس: تستخدم الحساسات في العديد من المهام، منها:



regulating temperatures.	operating the lights through various methods.	detecting smoke from fires.
ضبط درجات الحرارة.	تشغيل الأضواء بطرق مختلفة.	اكتشاف دخان الحرائق.







أهم الكلمات والمصطلحات			
Green technology	التكنولوجيا الخضراء	Renewable energy	الطاقة المتجددة
Sustainable technology	التكنولوجيا المستدامة	Solar panels	الألواح الشمسية
Clean technology	التكنولوجيا النظيفة	Wind turbines	توربينات الرياح
Optimize the use	تحسين استخدام	Hydropower	الطاقة الكهرومائية
Electric vehicles	المركبات الكهربائية	Geothermal energy	الطاقة الحرارية الأرضية
Emission of harmful substances	انبعاث المواد الضارة	Bioenergy	الطاقة الحيوية
Fuel consumption	استهلاك الوقود	Green building	البناء الأخضر
Charging station	محطة شحن	Energy-efficient materials	مواد ذات كفاءة عالية في استهلاك الطاقة
Smart transportation	النقل الذكي	Waste recycling	إعادة تدوير النفايات
Nutrient-rich compost	سماد غني بالعناصر الغذائية	Smart irrigation systems	أنظمة الري الذكية
Water treatment	معالجة المياه	Water-saving devices	أجهزة توفير المياه
Climate change	التغير المناخي	Global warming	الاحتباس الحراري
Carbon dioxide	ثاني أكسيد الكربون	Resource conservation	الحفاظ على الموارد
Photovoltaic panels	الألواح الفوتوفولطية	Body sensors	أجهزة استشعار الجسم
Regulating temperatures	تنظيم درجات الحرارة	Detecting smoke	كشف الدخان

Exercises on Lesson 1

1 Choose the correct answer:

1. Green technology is also known as .... technology
   - a. clean
   - b. sustainable
   - c. harmful
   - d. both a and b
2. Egypt is interested in .... to protect the environment.
   - a. diesel cars
   - b. electric cars
   - c. gas cars
   - d. none of them
3. Electric vehicles use .... to operate.
   - a. gas
   - b. batteries
   - c. the Sun
   - d. wind
4. One of the fields of using green technology is ....
   - a. fossil fuels
   - b. renewable energy
   - c. chemical production
   - d. mining
5. Renewable energy is such as ....
   - a. wind power
   - b. solar energy
   - c. fossil fuel
   - d. both a and b
6. Solar energy uses .... to generate electricity.
   - a. solar panels
   - b. wind turbines
   - c. dams
   - d. batteries
7. Green buildings use .... to reduce energy consumption.
   - a. harmful materials
   - b. nuclear energy
   - c. eco-friendly materials
   - d. gas heaters
8. .... using the Earth's internal heat to produce electricity.
   - a. Electricity
   - b. Geothermal energy
   - c. Solar energy
   - d. Wind power



9 .... using dams to generate electricity from water movement.

a. Geothermal energy
b. Wind power
c. Hydropower
d. Fossil fuel

10 Electric vehicles enhance .... in the transportation sector.

a. pollution
b. fossil fuel use
c. energy efficiency
d. none of them

11 Recycling involves turning waste materials into ....

a. fuel
b. new products
c. electricity
d. carbon emissions

12 .... using organic materials like soybeans and corn for production.

a. Bioenergy
b. Wind power
c. Solar energy
d. Hydropower

13 The recycling of organic waste produces ....

a. compost
b. fuel
c. plastic
d. glass

14 Purifying contaminated water is part of .... technology.

a. energy
b. waste
c. water treatment
d. recycling

15 One benefit of green technology is ....

a. resources conservation
b. reducing carbon emissions
c. increasing fuel consumption
d. both a and b

16 Sensors are used in numerous tasks, including ....

a. regulating temperatures
b. detecting fires smoke
c. operating the lights
d. all of them

17 Solar panels are used to convert .... into electrical energy.

a. wind
b. sunlight
c. water
d. heat

18 Drip irrigation is a .... irrigation systems.

a. efficient
b. smart
c. wasteful
d. both a and b

2 Put (✓) or (✗):

1. Green technology is also known as sustainable or clean technology. (   )
2. Egypt is not interested in using electric vehicles as an alternative to fuel cars. (   )
3. Electric cars operate using batteries and recharge at power stations. (   )
4. Solar energy uses wind turbines to generate electricity. (   )
5. 📖 The concept of green buildings is attributed to institutions that can optimize their resource consumption. (   )
6. Hydropower generates electricity by using water movement through dams. (   )
7. Geothermal energy relies on the Earth's internal heat to produce electricity. (   )
8. Green buildings use eco-friendly and energy-efficient materials. (   )
9. 📖 The concept of sensors in water faucets relies solely on automatically halting the water flow. (   )
10. Waste recycling involves transforming organic waste into compost to enhance soil fertility. (   )
11. Materials like paper, plastic, and metals can't be recycled. (   )
12. Water treatment in green technology does not include purifying contaminated water for reuse. (   )
13. The use of body sensors in green technology helps conserve water(   )



14 Wind power is not considered a form of renewable energy. ( )

15 📖 Electric vehicles represent a form of environmentally friendly technology. ( )

16 Smart transportation does not include the use of electric vehicles. ( )

17 📖 Green technology tools contribute to the escalation of environmental pollution due to their utilization. ( )

18 Solar energy technology does not rely on photovoltaic panels to generate electricity. ( )

19 Wasting energy is one of the advantages of sensors. ( )

20 Sensors are used to regulate temperatures, operate lights, and detect smoke from fires. ( )

3 Complete the missing parts using the words between the brackets:

{Hydropower - Bioenergy - Green Building- Smart transportation - Sensors}

1 .... are used to operate the lights through green buildings.

2 .... is using dams to generate electricity from water movement.

3 .... is utilizing electric vehicles to enhance energy efficiency.

4 .... uses organic materials like soybeans and corn for energy production.

5 The design and construction of buildings using eco-friendly, energy-efficient materials is called ....



Digital Transformation and Its Importance in Our Daily Lives

Digital Transformation:

The combination of digital technology in all aspects of business to enhance workflow efficiency, lower costs, and innovate products and services.

التحول الرقمي:

هو دمج التكنولوجيا الرقمية في جميع جوانب العمل لتحسين كفاءة سير العمل، وخفض التكاليف، وتطوير المنتجات والخدمات المقدمة.

The Importance of Digital Transformation

Digital transformation is crucial for organizations and businesses for various reasons, including:

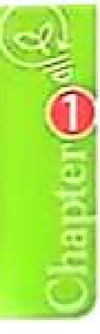
1. Enhancing efficiency and productivity through workflow optimization and error reduction results in time and effort savings, leading to cost savings.
2. Enhancing the quality of services and products offered to customers.
3. Enhancing sales and revenues through accessing new markets and customers.
4. Innovation and creativity: Digital transformation significantly enhances innovation and development in institutions and companies to deliver new and quality products and services.
5. Sustaining competitiveness through coping with the most recent technological advancements.
6. Enhancing decision-making by offering timely data, information, and analysis to facilitate informed decisions.
7. Minimizing energy and resource consumption.
8. Creating new employment opportunities.

يُعد التحول الرقمي ضروريًا للمؤسسات والشركات لعدة أسباب، منها:

1. زيادة الكفاءة والإنتاجية: من خلال تحسين سير العمل، وتقليل الأخطاء؛ مما يوفر الوقت والمال والجهد.
2. رفع مستوى الخدمات والمنتجات المقدمة للعملاء.
3. زيادة المبيعات والإيرادات من خلال الوصول إلى أسواق جديدة وعملاء جدد.
4. تعزيز الابتكار والإبداع في تطوير منتجات وخدمات جديدة وجيدة.
5. الحفاظ على القدرة التنافسية من خلال مواكبة أحدث التطورات التكنولوجية.
6. تحسين اتخاذ القرار من خلال توفير البيانات والمعلومات والتحليلات لاتخاذ قرارات مستنيرة في الوقت المناسب.
7. تقليل استخدام الطاقة والموارد.
8. خَلْق فرص عمل جديدة.







Heading Towards Digital Transformation

- **Digital transformation** is a national project that moves Egypt to an information environment linking all government agencies.
- Citizens can obtain all their services through the internet and mobile applications, providing various services and products in an easier and faster way.

نحو التحول الرقمي:

التحول الرقمي هو مشروع قومي ينقل مصر إلى التعامل من خلال بيئة معلوماتية تربط جميع الجهات الحكومية ببعضها البعض؛ حيث يمكن للمواطن الحصول على كل الخدمات والمنتجات من خلال الإنترنت وتطبيقات الموبايل بصورة أسهل وأسرع.

Tools of Digital Transformation

- Numerous digital transformation tools are accessible via programs, technologies, and services to help institutions and companies enhance performance, efficiency, and competitiveness, such as:
  - ✓ Tools for managing workflows.
  - ✓ Electronic payment methods.
  - ✓ Collaborative and communicative tools.
  - ✓ E-learning resources.
  - ✓ Artificial intelligence and machine learning technologies.
  - ✓ Cloud computing technologies.
  - ✓ Cybersecurity solutions.

أدوات التحول الرقمي: تتوفر العديد من أدوات التحول الرقمي من خلال برامج وتقنيات وخدمات لمساعدة المؤسسات والشركات على تحسين الأداء والكفاءة والقدرة التنافسية، مثل:

• أدوات إدارة سير العمل. • أدوات الدفع الإلكتروني. • أدوات التعاون والتواصل. • أدوات التعلم الإلكتروني.
• أدوات الذكاء الاصطناعي والتعلم الآلي. • أدوات الحوسبة السحابية. • أدوات الأمن السيبراني.

1 Tools for workflow management:

- They aim to enhance the efficiency of repetitive procedures and tasks.
- **Example:** the "Digital Egypt Platform," which aims to:
  1. Enhance government procedure efficiency.
  2. Deliver improved services to citizens.

مصر الرقمية

• **أدوات إدارة سير العمل:** تهدف إلى تحسين كفاءة العمليات والمهام المتكررة مثل «منصة مصر الرقمية»، والتي تهدف إلى تحسين كفاءة العمليات الحكومية، وتقديم خدمات أفضل للمواطنين.



Digital Egypt Platform

- It is a governmental digital platform offering various electronic services to citizens.
- Services include bill payments for electricity and water.
- The application is accessible for download and use on mobile devices.

• منصة «مصر الرقمية»: هي بوابة إلكترونية حكومية توفر العديد من الخدمات الإلكترونية للمواطنين، مثل دفع فواتير الكهرباء والماء... ويمكن تحميل التطبيق واستخدامه على جهاز الموبايل.

2 Electronic payment methods:



1 Electronic Payment Cards "Meeza":

They offer convenience by provide easy, fast, and secure electronic payment methods to simplify electronic financial transactions for individuals.

2 INSTAPAY application for electronic payments



- Licensed and sanctioned by the Central Bank of Egypt
- This application enables the transfer and reception of funds via a bank account or digital wallet. It offers various facilities, including bill payments.

أدوات الدفع الإلكتروني مثل:

1 بطاقات الدفع الإلكترونية «ميزة»:

حيث توفر طرق دفع إلكترونية سهلة وسريعة وآمنة؛ لتسهيل المعاملات المالية الإلكترونية للمواطنين.

2 تطبيق نظام الدفع الإلكتروني «إنستاباي INSTAPAY»:

• مرخص ومُعتمد من قِبَل البنك المركزي المصري.

• يسمح بإرسال واستقبال النقود عبر الحساب البنكي أو المحفظة الإلكترونية، ويقدم العديد من الخدمات مثل دفع الفواتير.

3 Collaboration and communication tools:



- These are video conference applications, such as Zoom and Google Meet

- It enables face-to-face communication with others.

- **Note:** To access any of the digital services or products, you must have an email address.

أدوات التعاون والتواصل:

• مثل برامج Zoom وGoogle meet، فهي تطبيقات مكالمات فيديو ومؤتمرات عبر الإنترنت، يمكنك استخدامها للاتصال بالآخرين وجهًا لوجه.

• ملاحظة هامة: للحصول على أي من الخدمات أو المنتجات الرقمية، يجب أن يكون لديك بريد إلكتروني.





The relationship between green technology and digital transformation

- Green technology and digital transformation are closely related, as each enhances the other and contributes to achieving common goals.
- The following table outlines the key areas common between green technology and digital transformation:

العلاقة بين التكنولوجيا الخضراء والتحول الرقمي:

ترتبط التكنولوجيا الخضراء بالتحول الرقمي ارتباطًا وثيقًا؛ حيث يُعزِّز كل منهما الآخر ويساهم في تحقيق أهداف مشتركة، ويوضح الجدول التالي أهم المحاور المشتركة بين التكنولوجيا الخضراء والتحول الرقمي:

The Most Important Common Axes أهم المحاور المشتركة	Green Technology التكنولوجيا الخضراء	Digital Transformation التحول الرقمي
1 **Enhancing resource utilization efficiency:** تعزيز كفاءة استخدام الموارد	Decreasing the utilization of natural resources, like energy and water, through the adoption of more efficient technologies. تقليل استهلاك الموارد الطبيعية، مثل الطاقة والمياه، من خلال استخدام تقنيات أكثر كفاءة.	Reducing reliance on raw materials such as paper and pens and minimizing waste. تقليل الاعتماد على الخامات منها (الورق- الأقلام ...)، وتقليل الهدر.
2 **Reducing harmful emissions:** خفض الانبعاثات الضارة	Using renewable energy sources and enhancing energy efficiency. استخدام مصادر طاقة متجددة، وتحسين كفاءة استخدام الطاقة.	Decreasing the necessity for transportation and mobility while enhancing the effectiveness of business transactions. تقليل الحاجة إلى النقل والتنقل وتحسين كفاءة العمليات التجارية.
3 **Supporting sustainability:** دعم الاستدامة	By protecting the environment and enhancing the quality of life for future generations. من خلال حماية البيئة وتحسين جودة الحياة للأجيال القادمة.	By enhancing resource efficiency, decreasing emissions, and promoting innovation. من خلال تحسين كفاءة استخدام الموارد، وخفض الانبعاثات، وتعزيز الابتكار.



Examples of green technology and digital transformation applications:



Benefits of integrating green technology with digital transformation

فوائد ربط التكنولوجيا الخضراء بالتحول الرقمي:

- Speeding up the process of the digital transformation. تسريع عملية التحول الرقمي.
- Enhancing the efficiency of green technology. تعزيز فعالية التكنولوجيا الخضراء.
- Creating new employment opportunities. خَلْق فرص عمل جديدة.
- Improving quality of life. تحسين جودة الحياة.

أهم الكلمات والمصطلحات			
Digital transformation	التحول الرقمي	Government agencies	الوكالات الحكومية
Daily lives	الحياة اليومية	Workflow management	إدارة سير العمل
Workflow efficiency	كفاءة سير العمل	Payment methods	طرق الدفع
Lower costs	خفض التكاليف	Collaborative tools	أدوات التعاون
Innovate products	ابتكار المنتجات	Coud computing	الحوسبة السحابية
Enhance quality	تحسين الجودة	Cybersecurity	الأمن السيبراني
New markets	أسواق جديدة	Renewable energy	الطاقة المتجددة
Timely data	البيانات في الوقت المناسب	Green technology	التكنولوجيا الخضراء
Energy consumption	استهلاك الطاقة	Smart cities	المدن الذكية
Information environment	بيئة المعلومات		





Exercises on Lesson 2

1 Choose the correct answer:

1. Digital transformation involves combination of .... into all aspects of business.
   a. digital technology b. paper documents
   c. raw materials d. traditional methods
2. The "Digital Egypt" platform is ....
   a. a social media app b. an e-government service
   c. a video game d. a fitness tracker
3. One of the importance of digital transformation is ....
   a. slowing workflows b. increasing costs
   c. enhancing efficiency d. reduced innovation
4. 📖 When using the Egypt Digital Portal, it is regarded as one of the ....
   a. piracy forms b. digital transformation tools
   c. irresponsible website usage. d. electronic assault forms
5. Digital transformation primarily aims to ....
   a. increase costs b. reduce efficiency
   c. enhance workflow d. limit innovation
6. 📖 Electronic payment applications can be used within the app ....
   a. INSTAPAY b. Google Meet
   c. WhatsApp d. Email
7. INSTAPAY is used for ....
   a. video conferencing b. electronic payments
   c. document scanning d. weather forecasting

8. Green technology and digital transformation both support ....
   a. resource waste
   b. increased emissions
   c. sustainability
   d. manual processes

9. Digital transformation helps organizations by ....
   a. reducing quality
   b. increasing waste
   c. enhancing decision-making
   d. limiting market access

10. The main purpose of "Digital Egypt" platform is to ....
    a. deliver improved services to citizens
    b. enhance government procedure efficiency
    c. provide e-learning resources
    d. both a and b

11. Electronic payment cards provide .... electronic payment methods.
    a. easy
    b. secure
    c. fast
    d. all of them

12. Collaboration tools like Zoom and Google Meet are used for ....
    a. document printing
    b. face-to-face communication
    c. energy consumption
    d. raw material procurement

13. Which of the following is NOT a tool for digital transformation?
    a. Workflow management tools
    b. Electronic payment methods
    c. Virtual reality systems
    d. Artificial intelligence technologies

14. To access digital services, one needs a/an ....
    a. postal address
    b. telephone number
    c. bank account
    d. email address

15. INSTAPAY is licensed by the ....
    a. National Bank of Egypt
    b. Central Bank of Egypt
    c. Private Companies
    d. Ministry of Finance

16. Green technology and digital transformation both focus on ....
    a. resource waste
    b. paper consumption
    c. enhancing resource efficiency
    d. decreasing innovation





17 Precision farming integrates .... with green technology.

a. manual labour
b. digital transformation
c. fossil fuels
d. paper documents

18 Smart buildings and smart transportation integrate green technology with ....

a. outdated technology
b. traditional infrastructure
c. digital transformation
d. all of them

19 .... is licensed by the Central Bank of Egypt, enables funds transfer and reception.

a. Zoom
b. Instapay
c. Digital Egypt
d. Email

20 Green technology and digital transformation tools work on ....

a. increasing environmental resource pollution.
b. minimizing harm to the surrounding environment.
c. increasing the rate of raw materials consumption.
d. raising the costs of digital services.

21 .... is a common characteristic shared by green technology and digital transformation.

a. Challenges in digital communication between citizens and government services offered by relevant ministries.
b. Slow processes for acquiring digital services.
c. Access digital services rapidly and securely.
d. Vulnerability of data to hacking on the Internet.

22 22- Digital transformation supports sustainability by ....

a. decreasing emissions
b. promoting innovation.
c.enhancing resource efficiency
d. all of them

23 23- Digital transformation helps reduce harmful emissions by ....

a. increasing transportation
b. decreasing raw material use
c. relying on fossil fuels
d. enhancing paper usage

2 Put (✓) or (✗):

1. The "Digital Egypt" platform offers electronic services to citizens. ( )
2. Digital transformation does not reduce costs in businesses. ( )
3. One benefit of digital transformation is the creation of new employment opportunities. ( )
4. Digital transformation tools do not include electronic payment methods. ( )
5. INSTAPAY is an app for electronic payments licensed by the Central Bank of Egypt. ( )
6. Electronic payment methods are typically inconvenient and slow. ( )
7. Collaboration tools in digital transformation include Zoom and Google Meet. ( )
8. An email address is not required to access digital services or products. ( )
9. Green technology and digital transformation are unrelated and do not influence each other. ( )
10. Cybersecurity solutions are from the tools used for digital transformation. ( )
11. Reducing the utilization of natural resources is a common goal of both green technology and digital transformation. ( )
12. The "Digital Egypt" platform cannot be accessed on mobile devices. ( )
13. Smart cities are an example of the integration of green technology with digital transformation. ( )
14. Digital transformation decreases the effectiveness of business transactions. ( )
15. Reducing emissions is a goal of both green technology and digital transformation. ( )



16 Enhancing resource efficiency is a benefit of integrating green technology with digital transformation. ( )

17 Cloud computing technologies are not necessary for digital transformation. ( )

18 One of the benefits of integrating green technology with digital transformation is improving the quality of life. ( )

19 Digital transformation involves integrating digital technology into all aspects of business to enhance workflow efficiency. ( )

20 The main purpose of digital transformation is to increase the need for raw materials like paper and pens. ( )

21 The integration of green technology with digital transformation can lead to speeding up the digital transformation process. ( )

22 Precision farming is an example of how green technology can be integrated with digital transformation. ( )

3 Match:

Column (A)	Column (B)
1 Workflow Management Tools	a. it enhances the efficiency of repetitive procedures and tasks.
2 Electronic Payment Methods	b. involves integrating digital technology to enhance workflow, lower costs, and innovate products
3 Collaboration and Comm. Tools	c. enables online face-to-face communication such as Zoom and Google Meet.
4 Digital Transformation	d. offers convenient financial transactions through fast, secure, and easy electronic payments.
5 Green Technology	e. focuses on reducing environmental impact by enhancing resource efficiency

1 .... 2 .... 3 .... 4 .... 5 ....



1 Choose the correct answer:

1. Bioenergy uses ....
   a. plastic b. organic materials c. metal d. glass
2. Hydropower uses ....
   a. water movement b. wind c. sunlight d. soil
3. Smart transportation uses ....
   a. diesel cars b. electric vehicles
   c. gas cars d. none of them
4. .... called as sustainable technology or clean technology.
   a. biotechnology b. nanotechnology
   c. grey technology d. green technology
5. Which of these is NOT a renewable energy source?
   a. Wind power b. Hydropower
   c. Solar power d. Coal
6. Digital transformation tools do NOT include ....
   a. e-learning resources. b. cloud computing
   c. typewriters d. cybersecurity solutions
7. One benefit of integrating green technology with digital transformation is ....
   a. slowing down innovation b. increasing costs
   c. improving quality of life d. limiting job creation

2 Put (✓) or (✗):

1. Solar energy is using the Earth's internal heat to produce electricity. (   )
2. Digital transformation has no impact on the quality of services and products offered to customers. (   )
3. Bioenergy is using organic materials like soybeans and corn for production. (   )
4. The necessity for transportation and mobility increases with digital transformation. (   )
5. Hydropower generates electricity by using water movement through dams. (   )
6. Digital transformation does not reduce costs in businesses. (   )
7. Materials like paper, plastic, and metals can be recycled. (   )
8. Collaboration tools in digital transformation include Zoom and Google Meet. (   )



Operating Systems

In previous grades, we studied operating systems and software, and we learned about the importance of the operating system and the hardware components of a computer.

درسنا في الصفوف السابقة أنظمة التشغيل والبرمجيات، وتعرفنا على أهمية نظام التشغيل والمكونات المادية لجهاز الكمبيوتر.

Operating System:

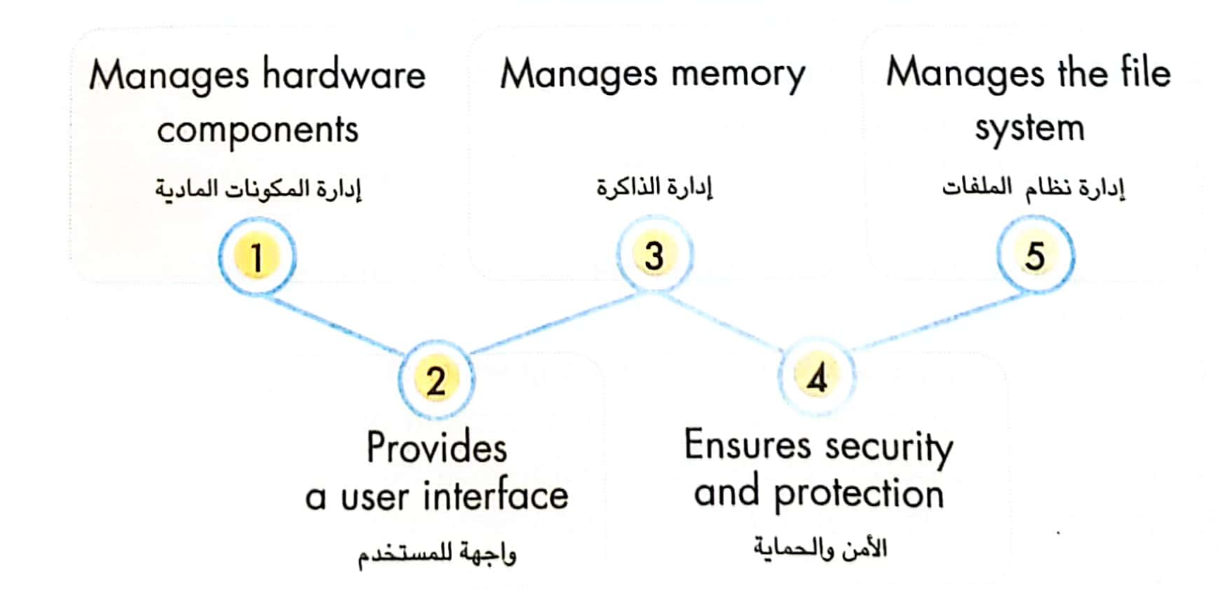
- It is an interface between the user and hardware and software.
- It is responsible for:
  1. managing hardware components.
  2. running all software.
  3. helping the user accomplish their various tasks on the computer easily and smoothly.

تعريف نظام التشغيل:

ويمكن تعريف نظام التشغيل على أنه واجهة بين المستخدم والأجهزة والبرمجيات، فهو المسئول عن إدارة المكونات المادية، وتشغيل جميع البرمجيات، ومساعدة المستخدم في إنجاز مهامه المختلفة على جهاز الكمبيوتر بسهولة ويسر.

Key Functions of the Operating System

وظائف نظام التشغيل





- Modern electronic devices, smart devices, and operating systems used in our lives:
- Operating systems are necessary for running and managing various modern electronic and smart devices.

الأجهزة الإلكترونية والأجهزة الذكية الحديثة وأنظمة التشغيل المستخدمة في حياتنا:

- تعتبر أنظمة التشغيل ضرورية لتشغيل وإدارة الأجهزة الإلكترونية والأجهزة الذكية الحديثة المختلفة.

Examples of Operating systems

1 Personal computers (PCs):

- Desktop and laptop computers use operating systems such as Microsoft Windows, macOS, and different Linux distributions.



أجهزة الكمبيوتر الشخصية:

- تستخدم أجهزة الكمبيوتر المكتبية وأجهزة الكمبيوتر المحمولة أنظمة تشغيل مثل: Microsoft Windows وmacOS وتوزيعات مختلفة من Linux.

2 Mobile devices:

- Smartphones and tablets rely on operating systems, such as:
  - iOS by Apple
  - Android by Google
  - Other mobile operating systems





الأجهزة المحمولة:

- تعتمد الهواتف الذكية والأجهزة اللوحية على أنظمة التشغيل مثل:
  - نظام التشغيل iOS من شركة Apple.
  - نظام التشغيل Android من شركة Google.
  - أنظمة تشغيل الأجهزة المحمولة الأخرى.





3 Servers:

- Servers use operating systems, such as:
  - Linux (various distributions)
  - Microsoft Windows Server
- Specialized server operating systems are used to manage network resources and deliver a range of services.



أجهزة الخوادم:

- تستخدم أجهزة الخوادم أنظمة تشغيل مثل:
  - نظام التشغيل Linux (بتوزيعاته المختلفة).
  - نظام التشغيل Microsoft Windows Server.
- أنظمة تشغيل الخوادم المتخصصة الأخرى لإدارة موارد الشبكة وتقديم خدماتها المختلفة.

4 Gaming consoles:

- Gaming consoles like **Xbox**, **PlayStation**, and **Nintendo Switch** have exclusive operating systems tailored for gaming and multimedia applications.



وحدات تحكم الألعاب:

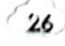
تتمتع وحدات تحكم الألعاب مثل: Xbox, PlayStation و Nintendo Switch بأنظمة تشغيل خاصة بها محسنة لتطبيقات الألعاب والوسائط المتعددة.

5 Smart TVs:

- Smart TVs operate on systems like **Android TV**, **Tizen**, **webOS**, and others to provide smart advantages such as streaming services, applications, and internet connectivity.

أجهزة التلفزيون الذكية:

تعمل أجهزة التلفزيون الذكية على أنظمة تشغيل مثل Android TV و Tizen و webOS وغيرها؛ لتوفير ميزات ذكية مثل خدمات البث والتطبيقات والاتصال بالإنترنت على أجهز التلفزيون الذكية.





6 Wearable devices:

- Wearable devices like **smartwatches** and **fitness trackers** use operating systems specifically designed for their unique functions and requirements.

الأجهزة القابلة للارتداء:

- الأجهزة القابلة للارتداء Wearable Devices مثل الساعات الذكية وأجهزة تتبع اللياقة البدنية، تستخدم أجهزتها أنظمة تشغيل مصممة خصيصًا لوظائفها المحددة ومتطلبات تلك الأجهزة.

7 Network devices:

- **Routers**, **switches**, and other network equipment use operating systems to manage network settings and security features.

أجهزة الشبكة:

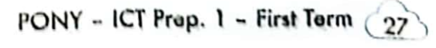
- تستخدم أجهزة التوجيه Routers والمحولات Switches ومعدات الشبكة الأخرى أنظمة التشغيل لإدارة الشبكة والإعدادات ومميزات الأمان بالشبكة.

8 Automotive systems:

- Modern cars and vehicles often have operating systems to control various functions such as infotainment, navigation, and driver assistance technologies while driving and controlling the vehicle.

أنظمة السيارات:

- غالبًا ما تحتوي السيارات والمركبات الحديثة على أنظمة تشغيل للتحكم في الوظائف المختلفة مثل: أنظمة المعلومات والترفيه والملاحة وتقنيات مساعدة السائق أثناء قيادة السيارة والتحكم بها.





9 Embedded systems:

- Operating systems are used in embedded systems, such as:
  - Automated Teller Machines (ATMs)
  - Point of Sale Terminals (POS)
- POS terminals are electronic devices that allow customers to pay for purchased products, by deducting the cost from their bank account instead of using cash.



الأنظمة المدمجة: • تُستخدم أنظمة التشغيل في الأنظمة المدمجة مثل:

- أجهزة الصراف الآلي Automated Teller Machine (ATM). - محطات نقاط البيع Point of Sale Terminal (POS).
- محطات نقاط البيع هي عبارة عن جهاز إلكتروني يستطيع من خلاله العميل دفع ثمن المنتجات التي قام بشرائها؛ ليتم خصم ثمن تلك المنتجات من حسابه البنكي بدلًا من أن يقوم بدفع ثمنها نقدًا.

10 Industrial control systems (ICS):

- It is a broad term that includes many industrial control systems and devices used in industrial facilities to control the performance of machines and industrial processes.
- Industrial control systems work to:
  - Control and monitor the progress of industrial processes, which increases factory productivity and improves the quality of manufactured products.
  - Provide a safe environment for health and operational safety by reducing exposure to hazardous materials or environments such as chemical plants, water and waste treatment centers, nuclear power plants, and refineries.
  - Industrial control systems are used in most industrial sectors, such as energy, transportation, food and petrochemical production, electronics, medical industries, and many other industries.

أنظمة التحكم الصناعية:

هو مصطلح واسع يشمل العديد من أنظمة التحكم الصناعية والأجهزة التي تستخدم في المنشآت الصناعية للتحكم في أداء الآلات والعمليات الصناعية، وتعمل أنظمة التحكم الصناعية على التالي:

- ضبط ومراقبة سير العمليات الصناعية؛ مما يزيد من إنتاجية المصانع ويحسن جودة المنتجات المصنعة.
- توفر بيئة آمنة للصحة والسلامة التشغيلية من خلال تقليل التعرض للمواد أو البيئات الخطرة مثل: المصانع الكيماوية، ومراكز معالجة المياه والنفايات، ومنشآت الطاقة النووية، ومصافي التكرير.
- تُستخدم أنظمة التحكم الصناعية في غالبية قطاعات الصناعة مثل: مجال الطاقة والنقل والإنتاج الغذائي والبتروكيميائي والصناعات الإلكترونية والطبية والعديد من الصناعات الأخرى.

Startup Screen of an Operating System

» The operating system's startup screen (desktop) includes:

1. A set of icons arranged in a specific order over a background image or color that the user selects.
2. Bars contain icons representing installed software and other icons for adjusting system settings, such as date, time, and configurations.



الشاشة الافتتاحية لنظام التشغيل:

تتضمن الشاشة الافتتاحية لنظام التشغيل (سطح المكتب) مجموعة من الرموز تُسمى أيقونات Icons تظهر مرتبة بشكل معين فوق خلفية Background عبارة صورة أو لون يقوم المستخدم بتحديدهم.

أشرطة Bars تحتوي على أيقونات ترمز لبرمجيات مثبتة على نظام التشغيل وأيقونات أخرى لضبط بعض إعدادات النظام مثل: التاريخ والوقت وإعدادات الصوت والشبكة.

NOTES:

- The startup screen varies for different operating systems.
- The startup screen of an operating system also varies depending on the version of the operating system.

- اختلاف الشاشة الافتتاحية لأنظمة التشغيل المختلفة.
- اختلاف الشاشة الافتتاحية لنظام التشغيل، وذلك حسب إصدار نظام التشغيل.

أهم الكلمات والمصطلحات			
Operating system	نظام التشغيل	Wearable devices	الأجهزة القابلة للارتداء
Hardware components	مكونات الأجهزة	Network devices	أجهزة الشبكات
Software components	مكونات البرامج	Automotive systems	أنظمة السيارات
Interface between	واجهة بين	Embedded systems	الأنظمة المدمجة
Smart devices	الأجهزة الذكية	Industrial control systems	أنظمة التحكم الصناعية
Personal computers	أجهزة الكمبيوتر الشخصية	Startup screen	شاشة بدء التشغيل
Mobile devices	الأجهزة المحمولة	Desktop	سطح المكتب
Servers	الخوادم	Icons	رموز
Gaming consoles	وحدات التحكم في الألعاب	System settings	إعدادات النظام
Smart TVs	التلفزيونات الذكية	Point of sale	نقاط البيع



Exercises on Lesson 3

1 Choose the correct answer:

1. .... is an interface between the user, hardware and software.
   a. Computer accessories   b. Operating System
   c. CPU   d. Smart devices.
2. Operating systems are necessary for managing ....
   a. Smart devices only   b. Televisions only
   c. Non-digital devices   d. All electronic devices
3. 📖 The .... software is responsible for managing the hardware components and running all other software.
   a. operating Systems   b. antivirus
   c. Word processing   d. Painter
4. Desktop computers commonly use operating systems like ....
   a. Android and iOS   b. Windows and macOS
   c. iOS and Linux   d. Android and Tizen
5. 📖 Operating systems like Android TV, Tizen, webOS, etc. are used with .... devices.
   a. television   b. server   c. print   d. networking
6. Smartphones typically run on ....
   a. Windows Server   b. macOS
   c. iOS and Android   d. Linux and Unix
7. 📖 .... devices are network equipment that requires an operating system to operate.
   a. Television   b. Printing   c. Smart watches   d. Routers
8. ATM machines operate using ....
   a. industrial control systems   b. embedded systems
   c. gaming consoles   d. desktop OS
9. 📖 .... is an electronic device through which the customer can pay for the products he has purchased.
   a. POS Terminal   b. ATM
   c. Industrial control system   d. Smart watch

10 Network devices like routers use operating systems for ....
a. media streaming
b. office work
c. network management
d. gaming and entertainment

11 📖 Servers use operating systems like ....
a. Android
b. Tizen
c. Linux
d. macOS

12 The operating system desktop screen includes ....
a. icons and bars
b. videos and games
c. only text
d. website links

13 📖 Most modern cars and vehicles have operating systems to control various functions, such as ....
a. information and navigation systems
b. point of sale
c. ATMs
d. printing

14 Industrial Control Systems (ICS) are used in ....
a. home appliances
b. personal computers
c. industrial facilities
d. smartphones

15 .... devices use operating systems tailored for gaming.
a. Servers
b. Smartwatches
c. ATMs
d. Gaming consoles

16 Wearable devices rely on operating systems designed for ....
a. laptops and desktops
b. gaming only
c. specialized functions
d. servers and networks

17 The startup screen varies depending on the ....
a. internet connection
b. document type
c. user's preference
d. OS version

2 Put (✓) or (✗):

1 An operating system manages hardware and software components. ( )
2 Operating systems are not necessary for operating and managing a variety of modern electronic devices. ( )
3 Smartphones and tablets run on operating systems like Microsoft Windows, Mac OS. ( )
4 Servers use operating systems like Linux and windows server. ( )
5 Gaming consoles have exclusive operating systems tailored for gaming and multimedia purposes. ( )

6. 📖 Smart TVs operate on platforms like Android TV and Tizen ( )
7. Modern cars and vehicles often have operating systems to control various functions, such as information and navigation systems. ( )
8. 📖 A word processing program manages the computer hardware components. ( )
9. Modern vehicles often have operating systems called Automotive Systems ( )
10. 📖 Device security and protection are inherent features of the operating system. ( )
11. 📖 Desktop computers utilize operating systems like Microsoft Windows. ( )
12. Point of Sale Terminals are examples of embedded systems that use operating systems. ( )
13. 📖 Utilizing wearable devices like smartwatches and fitness trackers does not necessitate an operating system. ( )
14. ATMs do not require an operating system for their operations. ( )
15. The startup screen varies for the operating system according to the version of the operating system. ( )
16. The desktop of an operating system includes icons arranged in a specific order. ( )
17. Gaming consoles such as PlayStation and Xbox use general-purpose operating systems. ( )

3 Complete the missing parts using the words between the brackets:

{ Embedded Systems- Wearable devices- Linux- automotive systems- Operating System }

1. Servers use operating systems like ....
2. .... is an interface between the user, hardware, and software.
3. Modern cars often have operating systems called .... to control various functions.
4. .... is an operating systems used in ATMs and POS Terminals.
5. .... like smart watches and fitness trackers.

Lesson 4

Installation and Removal of Software and Digital Peripherals

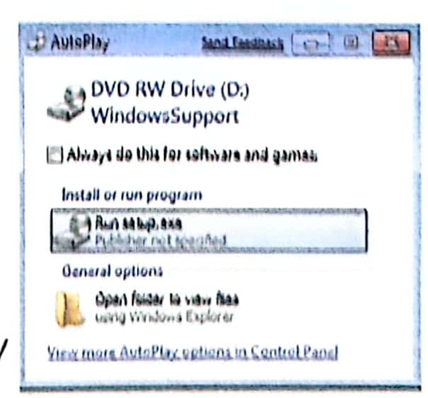
- While preparing and setting up to execute your project on a computer or mobile device, you will need to use various programs. You must ensure that these programs are available on the device.
- If the operating system does not have the program you need, you can get it yourself, either from a storage unit or by downloading it from the internet. You can then install the program on your computer to use it.

- أثناء قيامك بالإعداد والتجهيز لتنفيذ مشروعك على جهاز الكمبيوتر أو الموبايل، سوف تحتاج لاستخدام العديد من البرامج، ويجب التأكد من وجود تلك البرامج على الجهاز.
- إذا لم يكن نظام التشغيل مزودًا بالبرنامج الذي تحتاجه، فيمكنك الحصول على البرنامج بنفسك، إما من أحد وحدات التخزين أو من خلال تنزيل البرنامج عبر الإنترنت. ويمكنك بعد ذلك تثبيت البرنامج على جهاز الكمبيوتر الخاص بك لاستخدامه.

- How you start the installation process depends on the form in which the program comes.
  - If you purchased the program, it comes on a CD or DVD, and you use this disc to install the program.
  - On the other hand, if you downloaded the program from the internet, it will be in the form of a file, and this file is used to install the program.

- تعتمد كيفية بدء عملية التثبيت على الهيئة التي يأتي عليها البرنامج:
  - فإذا قمت بشراء البرنامج، فإن البرنامج يأتي على قرص مضغوط أو قرص DVD، ويُستخدم هذا القرص لتثبيت البرنامج.
  - ومن ناحية أخرى، إذا قمت بتنزيل البرنامج من الإنترنت، يكون البرنامج على هيئة ملف، ويُستخدم هذا الملف لتثبيت البرنامج.

First Installing a program from a CD or DVD



1. Insert the disc into your computer's CD or DVD drive. An AutoPlay dialog box appears. The following screen displays one of the processes that takes place in Windows 7
2. Click on Run SETUP.EXE, where SETUP.EXE is usually the name of the installation program.
3. Follow the installation instructions provided by the program.



- **Note:** Installation procedures differ from one program to another.

أولًا: تثبيت البرنامج من قرص مضغوط أو قرص DVD:

1 أدخل قرص البرنامج في محرك الأقراص المضغوطة أو أقراص DVD بجهاز الكمبيوتر الخاص بك. يظهر مربع حوار التشغيل التلقائي. وتوضح الشاشة التالية أحد المعالجات التي تحدث خلال نظام تشغيل Windows 7.

2 انقر فوق Run SETUP.EXE؛ حيث SETUP.EXE عادة هو اسم برنامج التثبيت.

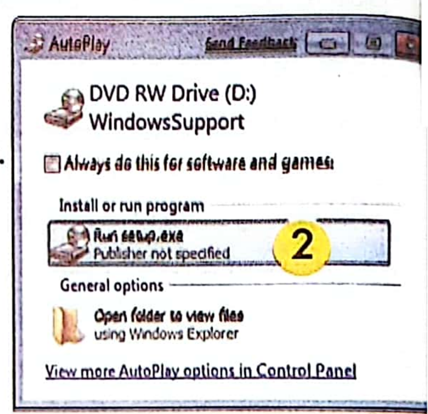
3 اتبع تعليمات التثبيت التي يوفرها البرنامج.

• ملاحظة: تختلف خطوات التثبيت من برنامج لآخر.

Second Installing a program from an Internet-downloaded file:

1. Use the "This PC" icon to access the downloaded file.
2. Double-clicking the file starts up the installer.

Note: The downloaded file may be compressed. You need to unzip it first to access and select the SETUP.EXE icon.



ثانيًا: تثبيت البرنامج من ملف تم تنزيله من الإنترنت:

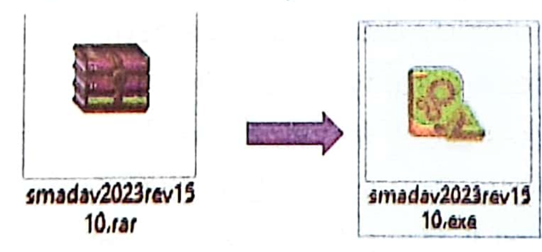
1 استخدم أيقونة جهاز الكمبيوتر «This PC» للوصول إلى الملف الذي تم تنزيله.

2 انقر نقرًا مزدوجًا فوق الملف؛ ليبدأ عمل برنامج التثبيت.

عزيزي الطالب.. الملف التي قمت بتنزيله قد يكون ملفًا مضغوطًا. فعليك أولًا فك الملف المضغوط؛ لكي تتمكن من التعامل مع الملف واختيار أيقونة SETUP.EXE.

Third Installing a program from a compressed file:

1. Extract the compressed files.
2. Then double-click the installation file.
3. Follow the installation instructions provided by the software.



ثالثًا: تثبيت البرنامج من ملف مضغوط:

1 قم بفك ضغط الملفات. 2 ثم انقر نقرًا مزدوجًا فوق ملف التثبيت. 3 اتبع تعليمات التثبيت التي يوفرها البرنامج.



Remove or Uninstall a Program

- When you plan to stop using a program installed on your computer or mobile, you should uninstall the program from your device.
- Uninstalling a program means that you delete all the files of the program that you want to remove from your computer.

إزالة أو إلغاء تثبيت برنامج: عندما تخطط للتوقف عن استخدام أحد البرامج المثبتة على جهاز الكمبيوتر أو الموبايل، يجب عليك إلغاء تثبيت البرنامج من جهازك. فإلغاء تثبيت أحد البرامج تعني أنك تقوم بحذف كافة الملفات الخاصة بالبرنامج المراد إزالته من جهاز الكمبيوتر.

Two methods to uninstall a program:

1. The program does this itself, as many programs come with their own uninstallation command.
2. Through the Control Panel, where the operating system helps you uninstall the program.

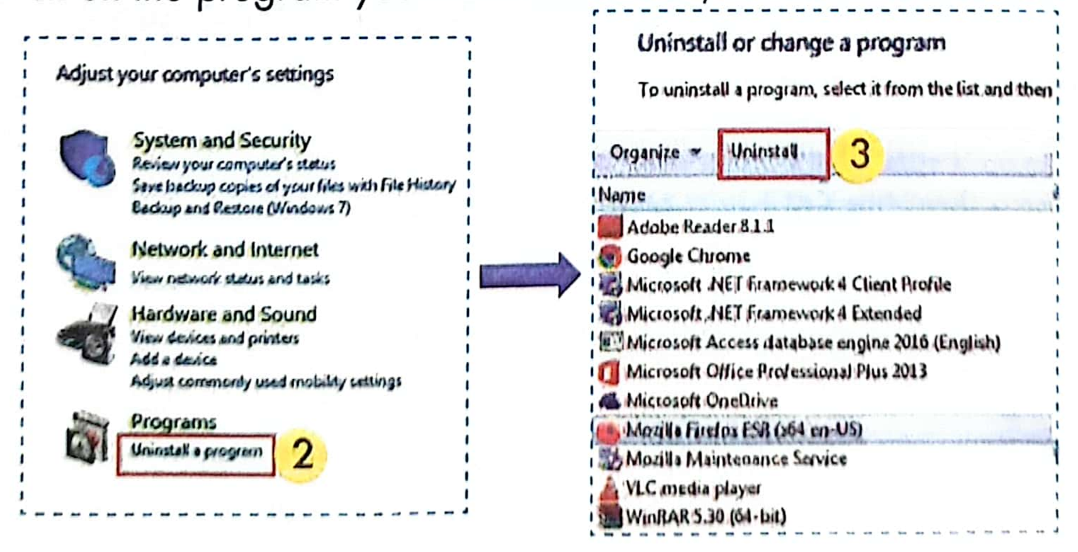
- **Note:** Removing unused programs saves disk storage space and speeds up and eases the use of the device.

هناك طريقتان لإزالة أو إلغاء تثبيت البرنامج، لتنفيذ ذلك:

- يقوم البرنامج نفسه بذلك؛ حيث تأتي العديد من البرامج مصحوبة بأمر إزالة أو إلغاء التثبيت الخاص بها.
- أو من خلال لوحة التحكم Control Panel؛ حيث يساعدك نظام التشغيل في إلغاء تثبيت البرنامج.
- ملحوظة: تؤدي إزالة البرامج غير المستخدمة إلى توفير في المساحة التخزينية على القرص وسرعة وسهولة استخدام الجهاز.

Steps to Uninstall a Program:

1. Open the Control Panel window.
2. Click on Uninstall a program to display the installed programs window.
3. Click on the program you want to uninstall, then click Uninstall.





خطوات إزالة برنامج مثبت على الجهاز:

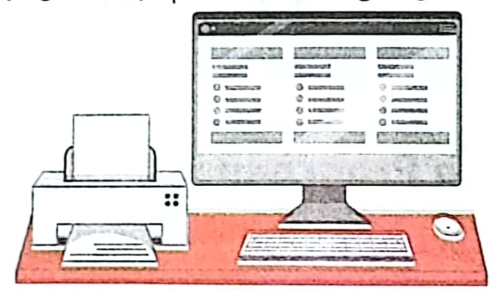
1. قم بفتح نافذة لوحة التحكم Control Panel.
2. انقر فوق Uninstall a program فتظهر نافذة البرامج المثبتة.
3. انقر فوق البرنامج الذي تريد إلغاء تثبيته، ثم انقر فوق Uninstall.

Setting Up and Configuring Hardware

- Operating systems support many devices attached to the computer such as printers, webcams, scanners, etc., depending on the type of operating system.
- The operating system automatically detects the new attached device and installs the correct driver so that you can use the new attached device with its full features.

إعداد وتثبيت الأجهزة:

تدعم نظم التشغيل العديد من الأجهزة الملحقة بالكمبيوتر مثل: الطابعة، كاميرا الويب، الماسح الضوئي... بشكل يختلف حسب نوع نظام التشغيل؛ حيث يكتشف نظام التشغيل الجهاز الملحق الجديد تلقائيًا، ويقوم نظام التشغيل بتثبيت برنامج التشغيل (Driver) الصحيح والمناسب للجهاز الملحق؛ حتى تتمكن من استخدام الجهاز الملحق الجديد بمميزاته الكاملة.



Installing a New Device:

- In many cases, new devices come with a setup CD or DVD that contains driver files and utility programs.
- The setup program automatically copies the driver files and the setup information file (inf.) into a dedicated folder.

تثبيت جهاز جديد:

في العديد من الحالات، تتضمن الأجهزة الجديدة قرصًا مضغوطًا CD , DVD للإعداد يحتوي على ملفات برامج التشغيل (Drivers)، وبرامج الأدوات المساعدة.

يقوم برنامج الإعداد Setup program بشكل تلقائي بنسخ ملفات برنامج التشغيل Driver وملف معلومات الإعداد (.inf) داخل مجلد مخصص لذلك.

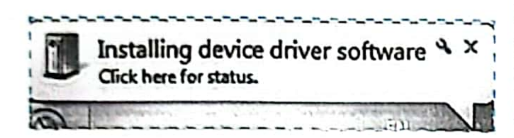


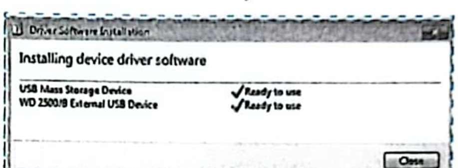


Installing a Plug and Play Device
تثبيت جهاز له خاصية التوصيل والتشغيل

First When the operating system includes a driver that matches the new peripheral device.

- Modern operating systems include a list of drivers for many peripheral devices.
- When you connect a new Plug and Play device for the first time, the operating system detects the new peripheral and searches its list of drivers for the appropriate driver for the new peripheral.
- If it finds a matching driver, it installs the correct driver file(s) and makes other necessary adjustments to the system without any intervention from you.





أولًا: عندما يتضمن نظام التشغيل برنامج تشغيل مطابق للجهاز الملحق الجديد:

أنظمة التشغيل الحديثة تتضمن قائمة من برامج التشغيل (Drivers) للعديد من الأجهزة الملحقة، وعند توصيل جهاز ملحق جديد به خاصية التوصيل والتشغيل Plug and Play لأول مرة؛ حيث يكتشف نظام التشغيل الجهاز الملحق الجديد، ويقوم نظام التشغيل بالبحث في قائمة برامج التشغيل (Drivers) التي لديه عن برنامج التشغيل (Driver) المناسب للجهاز الملحق الجديد، فإذا عثر على برنامج تشغيل مطابق للجهاز الملحق الجديد، فإنه يقوم بتثبيت ملف (أو ملفات) برنامج التشغيل الصحيح والمناسب وإجراء تعديلات ضرورية أخرى على النظام دون الحاجة إلى أي تدخل منك.

Second When the operating system does not include a matching driver for the new accessory

- When the operating system detects a new Plug and Play device (after connecting it to a USB port, for example) but cannot determine the appropriate driver for this new device, the operating system runs a wizard program to find the driver for the new peripheral,
- You can determine where the driver for the new peripheral is located, whether this program is on a CD or other storage device.

ثانيًا: تثبيت جهاز له خاصية التوصيل والتشغيل من خلال منفذ USB:

عندما يكتشف نظام التشغيل توصيل جهاز جديد به خاصية التوصيل والتشغيل (بعد توصيله بمنفذ USB، على سبيل المثال)، ولكن لم يتمكن نظام التشغيل من تحديد برنامج تشغيل (Driver) المناسب لهذا الجهاز الجديد، يقوم نظام التشغيل بتشغيل برنامج المعالج للعثور على أجهزة جديدة متصلة بجهاز الكمبيوتر. كما يمكنك تحديد مكان وجود برنامج التشغيل للجهاز الملحق الجديد، وقد يكون على قرص ضوئي CD أو أحد وحدات التخزين الأخرى.







Installing a Printer تثبيت الطابعة

First Installing a local printer (Directly Connected to the Computer) that supports Plug and Play.

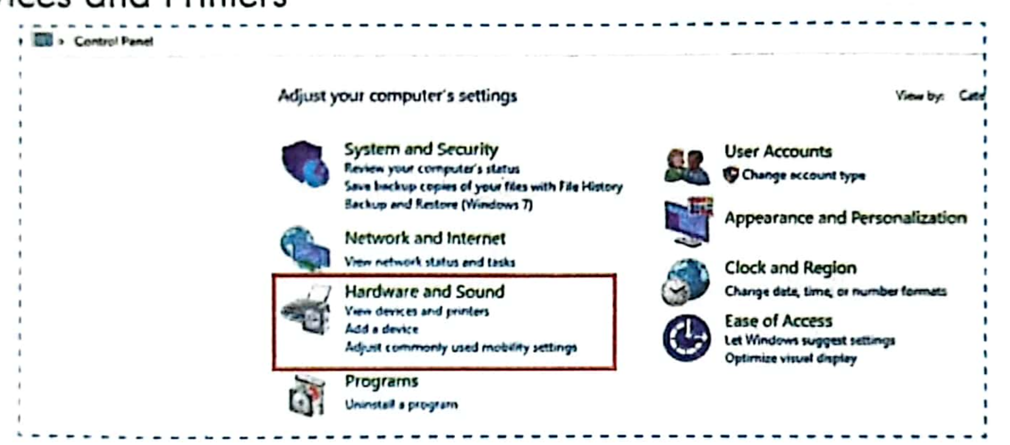
- Connect it to a USB port, and the Plug and Play feature will automatica handle the installation.

: تثبيت طابعة محلية (أي متصلة مباشرة بجهاز الكمبيوتر) وتدعم خاصية التوصيل والتشغيل:

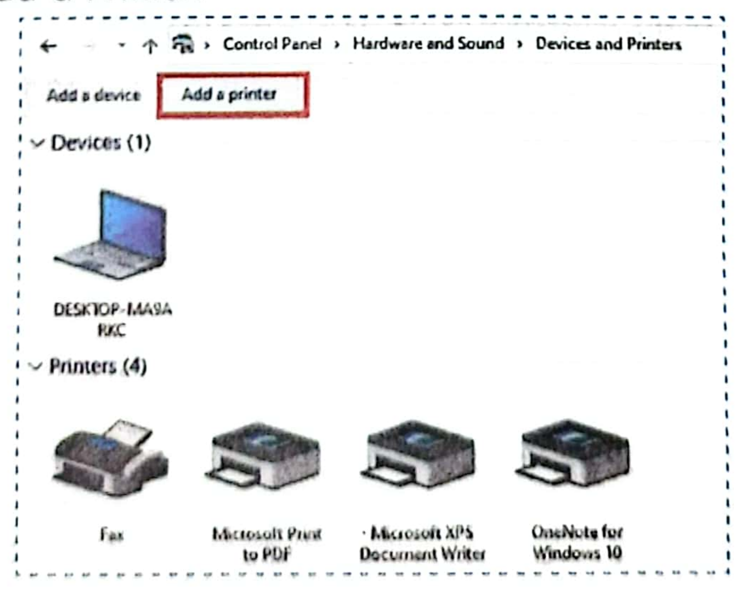
توصيلها بمنفذ USB، وستقوم خاصية التوصيل والتشغيل بعملية التثبيت تلقائيًا.

Second Installing a non-plug and play printer

- Printers that do not support Plug and Play may require some additional setup steps.
  - Open the Control Panel ⇨ Select "Hardware and Sound" ⇨ "Devices and Printers"



  - Click on "Add a Printer."



- We press the printer that I desire is not listed.

Add a device

Choose a device or printer to add to this PC

Searching for devices

The printer that I want isn't listed

Next Cancel

- Select Add a local printer or network printer with manual settings.

Add Printer

Find a printer by other options

○ My printer is a little older. Help me find it.

○ Select a shared printer by name

Browse...

Example: \\computername\printername or
http://computername/printers/printername/.printer

○ Add a printer using a TCP/IP address or hostname

○ Add a Bluetooth, wireless or network discoverable printer

◉ Add a local printer or network printer with manual settings

Next Cancel

ثانيًا: تثبيت طابعة لا تدعم خاصية التوصيل والتشغيل Non-Plug and Play Printer:

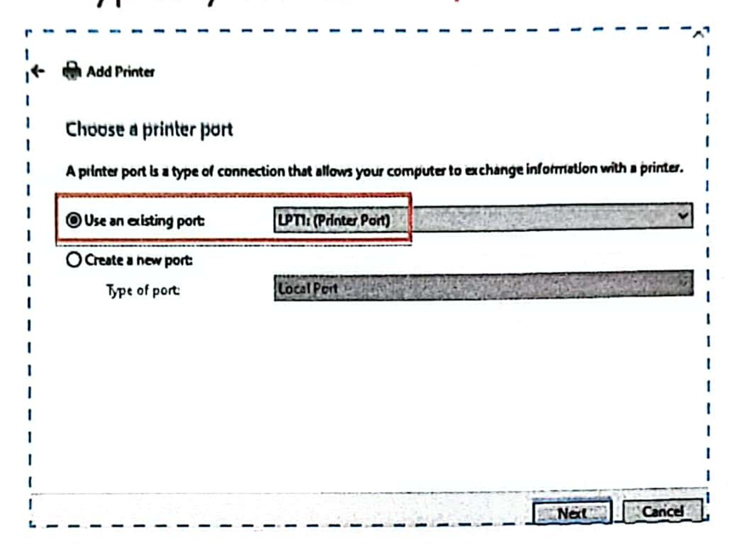
قد تتطلب الطابعات التي لا تدعم خاصية التوصيل والتشغيل بعض أعمال الإعدادات الإضافية.

- نفتح لوحة التحكم >> نختار منها Hardware and sound >> «الأجهزة والطابعات» Devices and Printers.
- انقر فوق «إضافة طابعة» Add a printer.
- نختار The printer that I want isn't listed.
- نختار Add a local printer or network printer with manual settings.

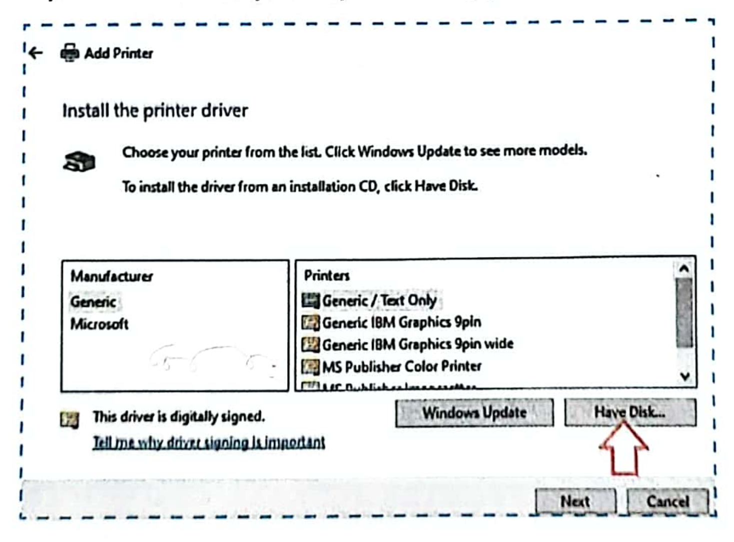


To complete the setup process:

- First, you need to determine which port your printer is connected to.
- For most older printers connected via a parallel port, the correct choice is the LPT1 port.
- Modern printers typically use the USB port.



- Click 'Next' to choose the appropriate driver.
- From the list of drivers available in the Driver Store, you can choose the one that is compatible with your printer type.



لإكمال عملية الإعداد:

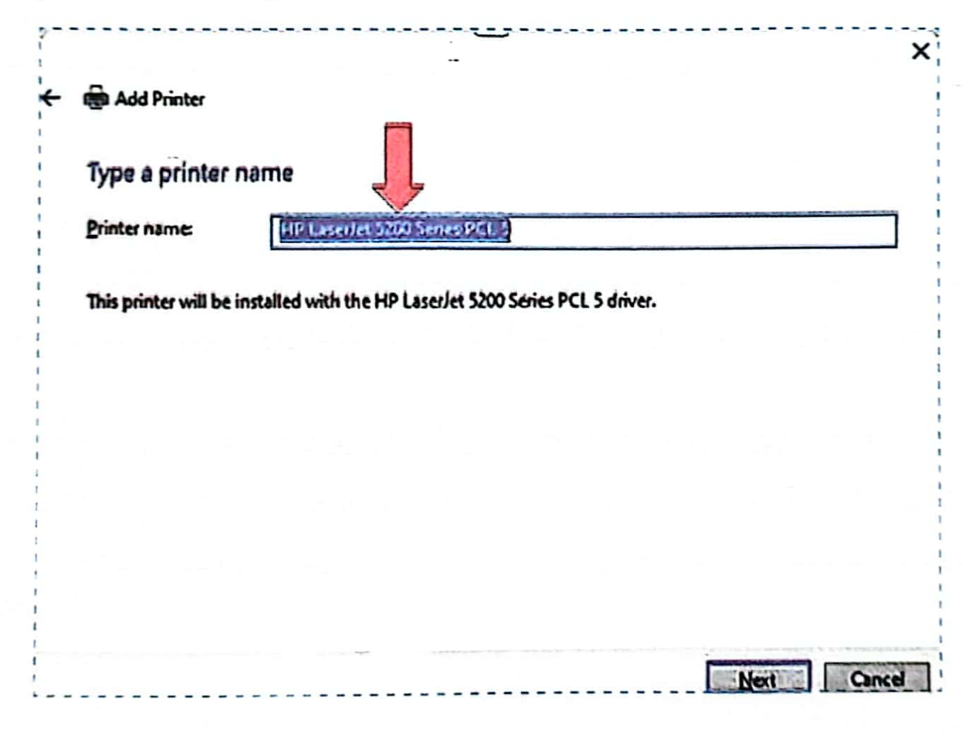
- يتعين عليك أولًا تحديد المنفذ الذي تتصل به الطابعة، بالنسبة لمعظم الطابعات القديمة التي تتصل بمنفذ متوازٍ، فإن الاختيار الصحيح هو المنفذ LPT1، وأما الطابعات الحديثة فتستخدم المنفذ USB.
- انقر فوق Next لاختيار برنامج التشغيل الصحيح.
- من قائمة برامج التشغيل المتوفرة في متجر برامج التشغيل، يمكنك اختيار البرنامج المتوافق مع نوع الطابعة.





If you do not find the required driver:

- Click on "Have Disk."
- Browse your storage devices for the driver you need.
- If you do not have a printer driver or suspect a newer version is available, click on "Windows Update" to update the list of printers.
- After the update is complete, check the list again to see if your printer model is now available.
- The final step in the printer setup process is to name the printer. The default name usually includes the manufacturer's name and printer model; you can change this to a more descriptive name now or later.



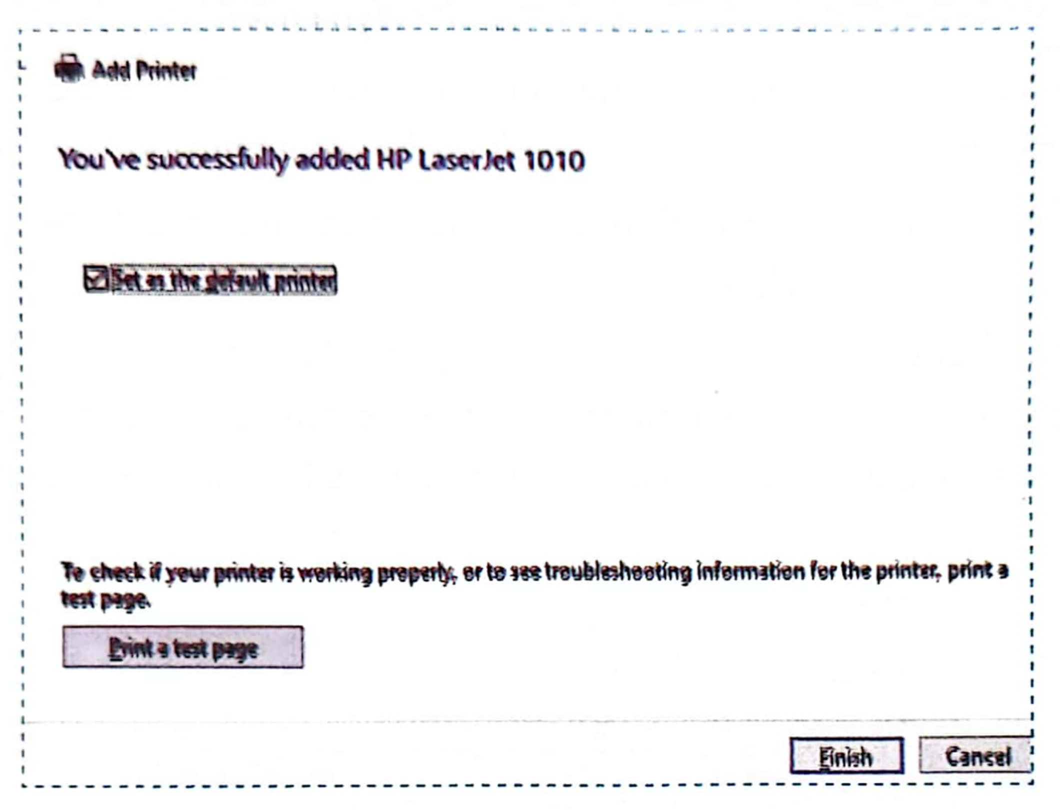
إذا لم تجد برنامج التشغيل المطلوب:

- فانقر فوق قرص خاص «Have Disk».
- استعرض وحدات التخزين للوصول إلى برنامج التشغيل المطلوب.
- إذا لم يكن لديك برنامج لتعريف الطابعة، أو إذا كنت تشك في توفر إصدار أحدث، فانقر فوق Windows Update لتحديث قائمة الطابعات.
- بعد اكتمال التحديث، تحقق من القائمة مرة أخرى لمعرفة ما إذا كان طراز الطابعة الخاصة بك أصبح متوفرًا.
- الخطوة الأخيرة في عملية إعداد الطابعة هي إعطاء اسم للطابعة، يتضمن الاسم الافتراضي عادةً اسم شركة المصنعة وطراز الطابعة؛ يمكنك تغيير هذه القيمة إلى اسم أكثر وصفًا الآن أو لاحقًا.





- After the printer installation process is completed successfully, the wizard provides the ability to print a test page to ensure that the printer is working properly.



- بعد إتمام عملية تثبيت الطابعة بنجاح، يوفر المعالج إمكانية طباعة صفحة اختبار؛ للتأكد من عمل الطابعة بشكل صحيح.

- **Note:** If the printer driver package includes a setup program, run the setup program to install the printer within the operating system.

- إذا كانت حزمة برنامج تشغيل الطابعة تتضمن برنامج إعداد قم بتشغيل برنامج الإعداد، ومن خلاله يمكنك تعريف الطابعة داخل نظام التشغيل.

أهم الكلمات والمصطلحات			
Installation process	عملية التثبيت	Plug and Play	التوصيل والتشغيل
Software disc	قرص البرامج	Successful installation	تثبيت ناجح
Installation file	ملف التثبيت	Printer driver	برنامج تشغيل الطابعة
Compressed files	الملفات المضغوطة	Windows Update	تحديث ويندوز
Uninstall a program	إلغاء تثبيت برنامج	Test page	صفحة اختبار
Control Panel	لوحة التحكم	Installation wizard	معالج التثبيت
Hardware components	مكونات الأجهزة	USB port	منفذ USB
Device driver	برنامج تشغيل الجهاز	Parallel port	منفذ متوازٍ

Exercises on Lesson 4

1 Choose the correct answer:

1. To install a program from a CD, you should first ....
   a. click on "Uninstall"
   b. insert the CD
   c. download it online
   d. open Control Panel

2. 📖 When you download software from the internet, the software is in the form of a/an .... which is used to install the software.
   a. digital fingerprint
   b. image
   c. file
   d. worksheet

3. The first step in installing a program from a compressed file is to ....
   a. click "Uninstall"
   b. download drivers
   c. insert a CD
   d. extract the files

4. 📖 When the operating system automatically detects a new peripheral device, it ....
   a. deletes the driver for the peripheral device
   b. install the appropriate driver for the peripheral device
   c. shut down the computer
   d. restart the computer

5. Uninstalling a program can be done through the ....
   a. Task Manager
   b. Control Panel
   c. File Explorer
   d. Recycle Bin

6. 📖 Modern operating systems include a list of .... for many accessory devices.
   a. malware
   b. viruses
   c. songs
   d. drivers

7. 📖 Removing unused programs leads to ....
   a. slowing down the computer
   b. saving storage space
   c. difficulty in using the device
   d. stopping the computer

8 The first step to uninstall a program via Control Panel is to ....

a. click "delete"
b. click "Uninstall a program"
c. insert a CD
d. download an app

9 📖 Removing a program means that you are ....

a. copying all the program files to the computer.
b. deleting all the program files from the computer.
c. pasting all the program files to the computer.
d. saving all the program files from the computer

10 📖 To install a new peripheral device, it is required to provide ....

a. information and data
b. drivers
c. folder
d. images

11 📖 Many programs come with a command ....

a. copy their installation
b. uninstall their installation
c. paste their installation
d. compress their installation

12 Modern operating systems include drivers for many ....

a. documents
b. peripherals
c. games
d. photos

13 Plug and Play devices are recognized by the operating system ....

a. automatically
b. after manual setup
c. through Control Panel
d. by default

14 When the operating system doesn't have a driver for a new device, it ....

a. stops the installation
b. installs the wrong driver
c. runs a wizard
d. disconnects the device

15 To install a non-Plug and Play printer, you need to access ....

a. MS Word
b. Taskbar
c. Control Panel
d. Recycle Bin

16 In the printer installation process, selecting the correct .... is necessary.

a. paper size
b. port
c. font
d. color

17 If the desired printer driver isn't listed, you should click ....

a. "Install Now"
b. "Have Disk"
c. "Finish"
d. "Run Setup"

18 The wizard allows you to print a test page to ensure ....

a. printer name is correct
b. driver is uninstalled
c. printer works properly
d. Ink is full

19 For older printers connected via parallel port, the correct port is usually ....

a. LPT1
b. USB
c. COM1
d. HDMI

20 When you can't find a printer driver, you should use ....

a. Windows Update
b. Control Panel
c. Device Manager
d. Task Manager

21 📖 The Plug and Play feature is ....

a. the operating system deletes the correct and appropriate driver for the new peripheral device.
b. the operating system installs the correct and appropriate driver for the new peripheral device.
c. the operating system copies the correct and appropriate driver for the new peripheral device.
d. the operating system shuts down the computer.

2 Put (✓) or (✗):

1 The installation process depends on the form in which the program comes. ( )

2 If you downloaded the program from the Internet, it comes as a file used for installation. ( )

3 If a program is purchased on a CD or DVD, you use the disc to install the program. ( )

4 You can install the program by clicking on SETUP.EXE. ( )

5 To install a program from a compressed file, first extract the files ( )

6 The LPT1 port is typically used for modern printers that connect via USB. ( )

7 📖 To uninstall the program, use the Control Panel. ( )

8 📖 While you are preparing and getting ready to implement your project on your computer, you must make sure that the required programs are on the device. ( )

9 Installing a Plug and Play printer may require manual setup. ( )

10 Uninstalling a program removes all its files from your computer. ( )

11 📖 Many programs come with their own removal or uninstall command. ( )

12 Programs can only be uninstalled through the Control Panel. ( )

13 📖 The operating system helps you uninstall the program. ( )

14 📖 Removing unused programs increases the storage space on the disk. ( )

15 Installing a new device always requires user intervention. ( )

16 📖 Operating systems support many devices attached to the computer such as the printer and webcam. ( )

17 📖 When the operating system automatically detects the new peripheral device; it installs the appropriate driver for the device. ( )

18 📖 Modern operating systems do not include a list of drivers for many accessory devices. ( )

19 📖 A driver is a file or files that the operating system installs to use the new Peripheral device with its full features. ( )

3 Complete the missing parts using the words between the brackets:

{Control Panel - setup.exe- storage space- drivers- Uninstalling a program}

1. Modern operating systems include a list of .... for many accessory devices.
2. Removing unused programs increases the .... on the disk.
3. .... deletes all files of the program from your computer.
4. Sometimes, to uninstall a program, use the ....
5. You can install program by clicking on ....

4 Write the steps to install the program from a CD or DVD on the computer:

1. ....
2. ....
3. ....

5 Write the steps to install the program from a file downloaded from the Internet on the computer:

1. ....
2. ....
3. ....

6 Write the steps to install the program from a compressed file on the computer:

1. ....
2. ....
3. ....



7 Write one of the ways to remove or uninstall the program to do this:

1 ....

2 ....

3 ....

8 Write the steps to remove a program installed on the device through the control panel:

1 ....

2 ....

3 ....

9 Write the steps to install a local printer (i.e. directly connected to the computer) that supports the plug and play feature

1 ....

2 ....

3 ....

10 Write the steps to install a printer that does not support the Non–Plug and Play Printer feature

1 ....

2 ....

3 ....





1 Choose the correct answer:

1. Point of Sale Terminals allow customers to ....
   a. watch videos
   b. print documents
   c. make payments
   d. surf the internet
2. To install a new peripheral device, it is required to provide ....
   a. information and data
   b. drivers
   c. folder
   d. images
3. .... devices typically use embedded operating systems.
   a. Desktop computers
   b. Smartphones
   c. ATMs
   d. Smart TVs
4. For older printers, the correct port is usually ....
   a. LPT1
   b. USB
   c. COM1
   d. HDMI
5. Smart TVs run on operating systems like ....
   a. Android TV and Tizen
   b. Windows and Linux
   c. macOS and iOS
   d. Unix and DOS
6. Modern operating systems include drivers for many ....
   a. documents
   b. peripherals
   c. games
   d. photos
7. The operating system startup screen called ....
   a. files
   b. desktop
   c. background
   d. This PC

2 Put (✓) or (✗):

1. Smart TVs use operating systems like Android TV, Tizen, and WebOS. (   )
2. Programs purchased on CDs or DVDs are installed using the disc. (   )
3. Smartwatches do not require an operating system. (   )
4. You should extract compressed files before installing the program. (   )
5. Smartphones and tablets only use Windows. (   )
6. Plug and Play devices automatically install when connected. (   )
7. OS startup screens is the same across versions. (   )
8. LPT1 port is typically used for modern USB printers. (   )

October Exam on Lessons (1 – 4)

1 Choose the correct answer:

1. Geothermal energy uses the .... to produce electricity.
   a. wind b. sunlight c. Earth's heat d. soil
2. To install a non-Plug and Play printer, you need to access ....
   a. MS Word b. Taskbar c. Control Panel d. Recycle Bin
3. Servers often use operating systems, such as ....
   a. Android and iOS b. Linux and Windows Server
   c. PlayStation OS d. Tizen and webOS
4. .... is licensed by the Central Bank of Egypt, enables funds transfer.
   a. Zoom b. Instapay c. Digital Egypt d. Email
5. The design and construction of buildings using eco-friendly, energy ....
   a. Smart home b. Sensor technology
   c. Green Building d. Green technology
6. Which operating system is NOT used on personal computers?
   a. Windows b. macOS c. Linux d. iOS
7. When installing a new device, the operating system often automatically installs the ....
   a. printer b. software update c. file explorer d. driver

2 Put (✓) or (✗):

1. Programs can only be uninstalled through the Control Panel. (   )
2. Smart TVs use operating systems like Android TV, Tizen, and WebOS. (   )
3. Smart energy grids are unrelated to the integration of green technology with digital transformation. (   )
4. OS automatically detects and installs drivers for new devices. (   )
5. OS interfaces between the user, hardware, and software. (   )
6. Solar energy uses wind turbines to generate electricity. (   )
7. "Digital Egypt" platform provides electronic services to citizens. (   )
8. Uninstalling a program removes all its files from your device. (   )



Electronic Mail (Email)

- In previous years, you have learned about some email service providers that help you create an email account.
- In this lesson, you will create an email account using one of the free email service providers and use it to send and receive emails to your teacher or a friend.

تعرفت في السنوات السابقة على بعض مقدمي خدمات البريد الإلكتروني، والتي تساعدك على إنشاء البريد الإلكتروني. وفي الدرس الحالي سوف تنشئ بريدًا إلكترونيًا من خلال أحد مقدمي خدمات البريد الإلكتروني المجاني، وتستخدمه لإرسال واستقبال رسائل البريد الإلكتروني لمعلمك أو أحد أصدقائك.

Definition of Email

- A digital communication system used to send and receive messages between users over the internet.
- It is one of the cloud computing tools.
- It is used to share texts, files, images, and other information.
- It is one of the most popular means of communication in the world.
- It is one of the indirect communication tools.

تعريف البريد الإلكتروني:

- هو نظام اتصال رقمي يُستخدم لإرسال واستقبال الرسائل بين المستخدمين عبر شبكة الإنترنت.
- هو أحد أدوات الحوسبة السحابية.
- يُستخدم لمشاركة النصوص والملفات والصور وغيرها من المعلومات.
- يُعتبر من وسائل التواصل الأكثر شيوعًا في العالم.
- يعتبر من أدوات الاتصال غير المباشر.





Components of an Email Address

Example: osama-pony@gmail.com

- An email address consists of three main components:



1 User Name:

- The part at the beginning of the email address, chosen by the user.
- It is a unique and distinctive name that is not reserved by anyone else.

2 The @ symbol (at sign):

- Separates the user name from the domain name.

3 Domain Name:

- The name of the email server that hosts the email account, where your emails are stored.
- It is a place to store your email messages.

مكونات عنوان البريد الإلكتروني:

يتكون عنوان البريد الإلكتروني (Email address) من ثلاثة مُكونات رئيسية، وهي:

1 اسم المُستخدِم:

هو الجزء الذي يقع في بداية عنوان البريد الإلكتروني، وهو اسم يقوم المستخدم باختياره وتحديده، اسم المُستخدم (User name) هو اسم فريد ومُميز وغير محجوز من قِبَلِ أي شخص آخر.

2 الرمز @ (at sign):

وهو رمز يفصل بين اسم المُستخدم وبين اسم خادم البريد الإلكتروني (اسم الدومين) المستخدم.

3 اسم الدومين:

هو اسم خادم البريد الإلكتروني (mail server) الذي يستضيف حساب البريد الإلكتروني، وهو مكان لتخزين رسائل بريدك الإلكتروني.

Advantages of Using Email



Speed	Sending and receiving messages very quickly.
Cost	Free in most cases.
Ease	Easy to use with the ability to send a message to any number of recipients at the lowest cost.
Diversity	Texts, files, images, and other information can be shared.
Reliability	Messages arrive reliably in most cases.
Digital Services	Registration is done using email on the websites of service providers and digital products online.

مميزات استخدام البريد الإلكتروني:

- السرعة: إرسال واستقبال الرسائل بسرعة كبيرة.
- التكلفة: مجاني في معظم الحالات.
- السهولة: سهل الاستخدام مع إمكانية إرسال رسالة إلى أي عدد من المتلقين وبأقل تكلفة.
- التنوع: يمكن مشاركة النصوص والملفات والصور وغيرها من المعلومات.
- الموثوقية: وصول الرسائل بشكل موثوق به في معظم الحالات.
- الخدمات الرقمية: يتم التسجيل باستخدام البريد الإلكتروني في مواقع مقدمي الخدمات والمنتجات الرقمية عبر الإنترنت.

Disadvantages of Using Email

Hacking	It can be hacked by hackers.
Spam	You may receive unwanted messages.
Fraud	You may receive fraudulent messages.
Viruses	Some emails may contain viruses or malware.
Privacy	Emails may not be completely secure.

عيوب استخدام البريد الإلكتروني:

- الاختراق: يمكن اختراقه من قِبَل المخترقين الهاكرز.
- الرسائل المزعجة Spam: قد تتلقى رسائل غير مرغوب فيها.
- الاحتيال: تلقي رسائل الاحتيال.
- الفيروسات: قد تحتوي بعض رسائل البريد الإلكتروني على فيروسات أو برامج ضارة.
- الخصوصية: قد لا تكون رسائل البريد الإلكتروني آمنة تمامًا.

Email Service Providers

» There are many free email service providers available, such as:

Email Service Providers

- Gmail
- Yahoo Mail
- Hotmail/Outlook

« مقدمو خدمات البريد الإلكتروني: هناك العديد من مقدمي خدمات البريد الإلكتروني المجاني المتاحين.

Creating an Email Account on Google

» Google offers many electronic services, including email service.

» To create an email account through Gmail service and obtain other Google services, you need to create a Google Account.

» **A Google account consists of:**

1. a user name
2. a password

نشاء بريد إلكتروني على جوجل Google:

يقدم لك Google العديد من الخدمات الإلكترونية، والتي منها خدمة البريد الإلكتروني.

ولإنشاء بريد إلكتروني من خلال خدمة Gmail والحصول على الخدمات الأخرى لـ «Google Account» يجب إنشاء حساب جوجل Google.

ويتكون حساب جوجل «Google Account» من اسم المستخدم User Name وكلمة مرور Password.

Advantages of Creating a Google Account

1. It enables you to log in to the Gmail email service.
2. It Enables you to use other Google features and services, such as:

- YouTube
- Google Drive
- Google Docs
- Google Meet

ميزات إنشاء حساب على جوجل «Google account»:

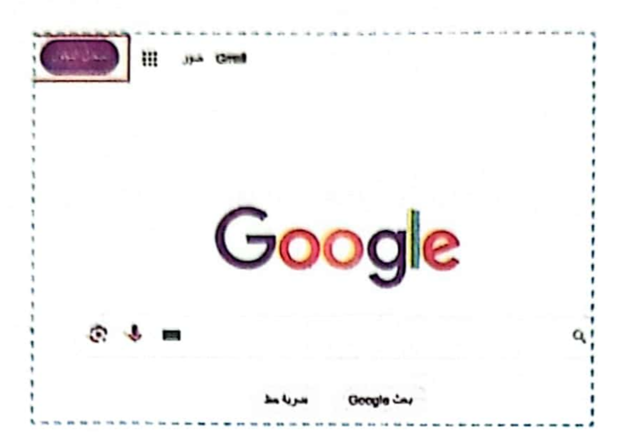
يُمكنك إنشاء حساب جوجل من الدخول إلى خدمة البريد الإلكتروني Gmail.

كما يُمكنك حساب جوجل من استخدام ميزات وخدمات أخرى لجوجل، مثل:

YouTube وGoogle Drive وGoogle Docs وGoogle Meet.

Steps to Create a Google Account

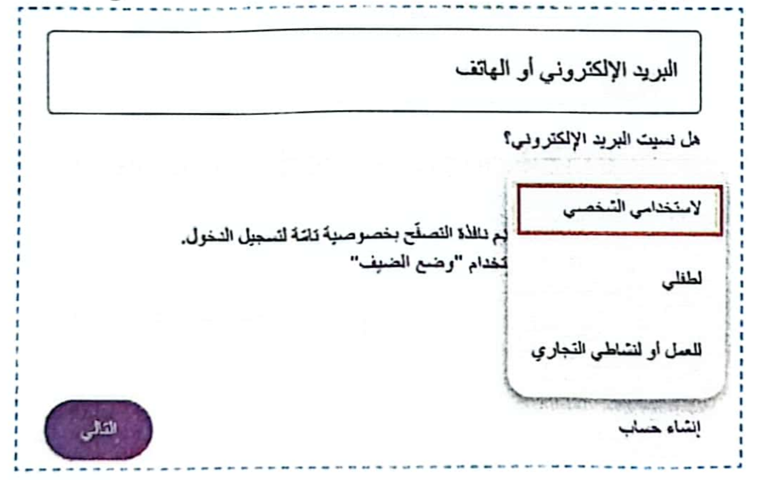
1. Go to the Google website: https://www.google.com.eg
2. Click "Sign in".



3. Click on "Create Account".

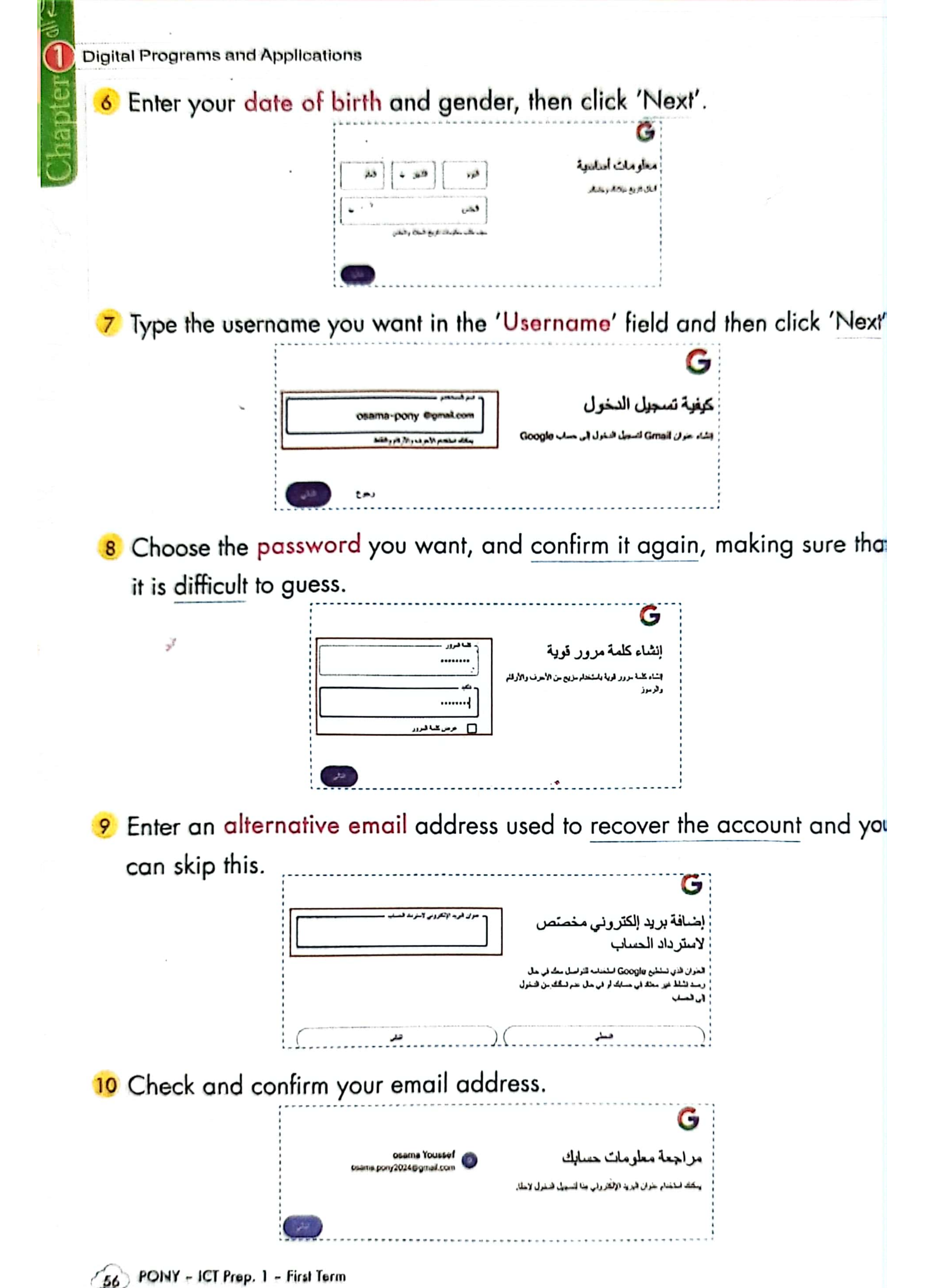


4. To establish a Google account, choose "Create my personal account."



5. Insert your 'First name' and 'Last name', then click the 'Next' button.

إنشاء حساب Google
osama
Youssef



6. Enter your date of birth and gender, then click 'Next'.

7. Type the username you want in the 'Username' field and then click 'Next'

8. Choose the password you want, and confirm it again, making sure that it is difficult to guess.

9. Enter an alternative email address used to recover the account and you can skip this.

10. Check and confirm your email address.

11 To complete the steps to create your email, review the terms of service and click '**I agree**' if you accept them.



12 Now that you have a 'Google Account' (username and password), you can use your 'Google Account' to access your email or many of the services provided by 'Google'.



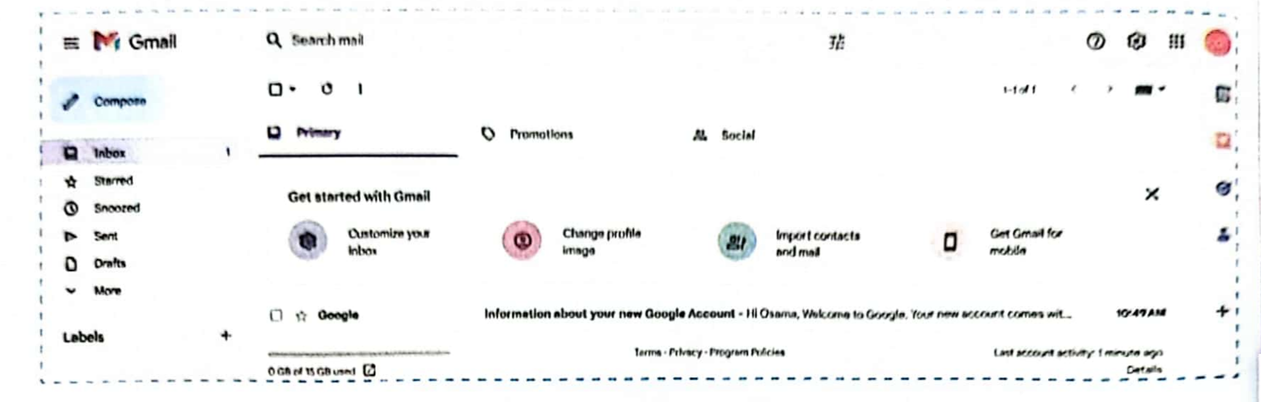
خطوات إنشاء حساب جوجل «Google account»:

1. قم بتحميل موقع جوجل /https://www.google.com.eg
2. اضغط [illegible]خول Sign in
3. اضغط إنشاء حساب Create Account
4. لعمل حساب شخصي اختر إنشاء حساب لنفسي.
5. أدخل اسمك الأول (First Name) واسمك الأخير (Last Name) ثم اضغط التالي.
6. أدخل تاريخ ميلادك والنوع، ثم اضغط التالي.
7. اكتب اسم المُستخدِم الذي ترغب به في خانة اسم المُستخدِم (Username) ثم اضغط التالي.
8. اختر كلمة المرور التي تريدها، وأكِّدها مرة أخرى، مع الحرص على أن يصعب تخمينها.
9. أدخل عنوان بريد إلكتروني بديل (Alternate email address) يُستخدم لاسترداد الحساب، ويمكنك تخطيّ ذلك.
10. قم بالاطلاع على عنوان بريدك الإلكتروني والتأكد منه.
11. لاستكمال خطوات إنشاء بريدك الإلكتروني، قم بالاطلاع على بنود الخدمة، واضغط أوافق في حالة قبولها.
12. الآن أصبح لديك حساب جوجل «Google Account» يتكون من (اسم مستخدم وكلمة مرور)، يمكنك [illegible]خدام حساب جوجل «Google Account» للدخول إلى بريدك الإلكتروني أو العديد من الخدمات التي يقدمها Google.

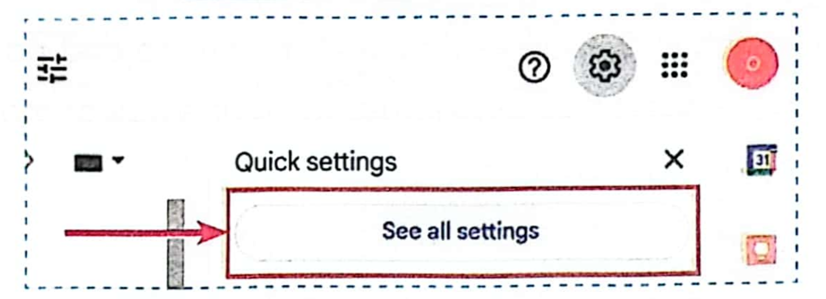


Gmail email interface

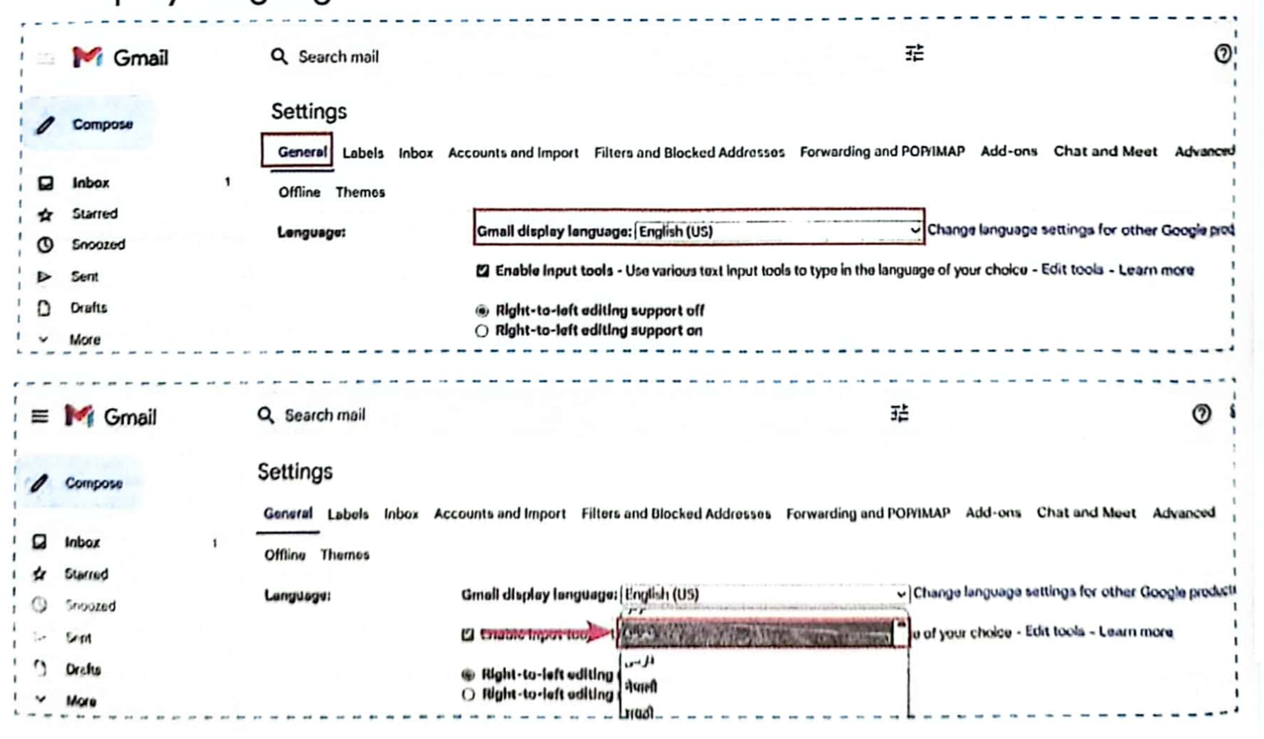
» The default appearance of the Gmail email window is as follows:



» The interface language can be modified by selecting the **settings icon** and then choosing 'See all settings'.



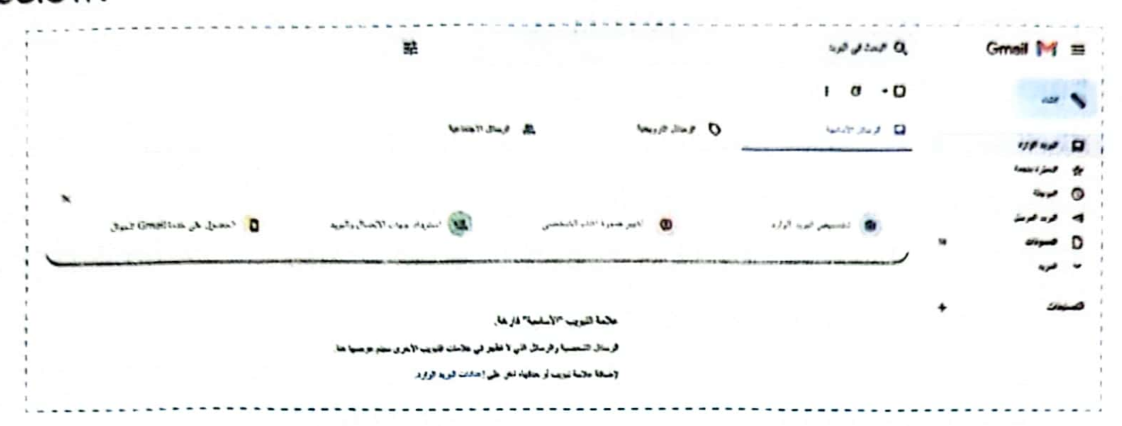
» From the "**General**" menu, select the Arabic language under "Gmail display language".



☐ Only send a response to people in my Contacts

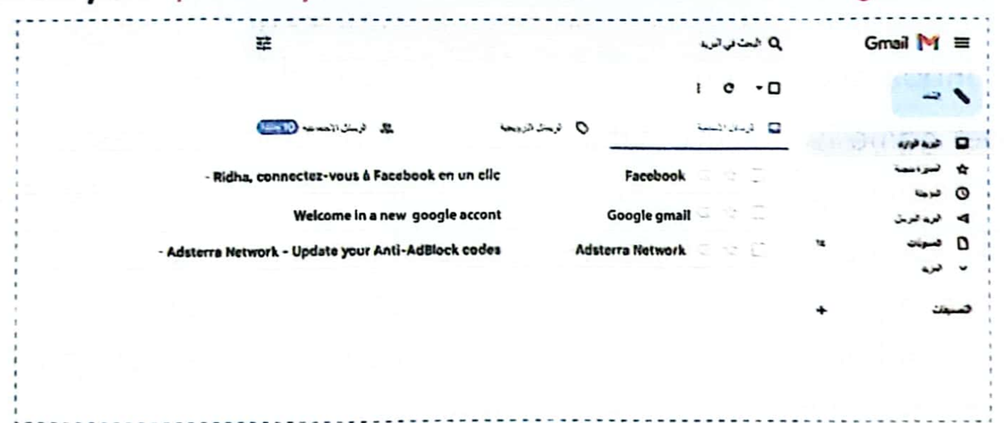
Save Changes | Cancel

» When you choose the Arabic language and click the 'Save Changes' button, the Gmail email window interface appears in Arabic, as shown below:



Sign out of your Gmail account

» Click on your profile picture icon and then choose 'Sign out'.



أهم الكلمات والمصطلحات					
Email service	خدمة البريد الإلكتروني	Gmail	خدمة البريد من جوجل	Digital communication	الاتصالات الرقمية
Google Account	حساب جوجل	Cloud computing	الحوسبة السحابية	Sign in	تسجيل الدخول
User name	اسم المستخدم	Create Account	إنشاء حساب	Domain name	اسم النطاق
Password	كلمة المرور	Email address	عنوان البريد الإلكتروني	Alternative email	البريد الإلكتروني البديل
Send messages	إرسال الرسائل	Google services	خدمات جوجل	Receive messages	استقبال الرسائل
Interface language	لغة الواجهة	Spam	رسائل غير مرغوب فيها	Sign out	تسجيل الخروج

Exercises on Lesson 5

1 Choose the correct answer:

1 📖 Email is a ....
a. manual communication system
b. digital communication system
c. direct communication system
d. virus system

2 Email is used to share ....
a. texts
b. files
c. images
d. all of them

3 One advantage of email is its ....
a. high cost
b. slow speed
c. ease of use
d. limited usage

4 📖 Through email, you can ....
a. delete files
b. use cloud computing applications
c. install programs
d. print files

5 An email address consists of .... main components.
a. one
b. two
c. three
d. four

6 The @ symbol in an email address separates the ....
a. username and domain name
b. subject and message
c. inbox and outbox
d. file and folder

7 User name is located at the .... of the email address.
a. beginning
b. end
c. middle
d. none of them

8 📖 One of the most important uses of email is to ....
a. scan papers
b. share information
c. cyberbullying
d. delete files on your device

9 📖 One of the advantages of using email is ....
a. speed in sending and receiving messages very quickly.
b. spam
c. fraud
d. viruses

10 Which of these is NOT a free email service provider?
a. Gmail
b. Yahoo Mail
c. Outlook
d. Google Meet

11 📖 Email is considered ....
a. one of the direct communication tools
b. one of the indirect communication tools.
c. manual communication system
d. text file

12 You can change the interface language in Gmail from settings icon,then ....

a. Trash folder b. Inbox c. General menu d. Profile picture

13 📖 One of the disadvantages of using email is ....

a. speed b. cost c. ease d. hacking

14 📖 From email service providers ....

a. Gmail b. Paint c. Google Docs d. YouTube

15 .... is the name of the email server that hosts the email account.

a. User name b. Domain name
c. Address d. Password

16 📖 To get one of the Gmail services, you must create ....

a. Text file b. "Google Account"
c. Presentation file d. "Google Meet"

17 An alternative email address is used for ....

a. Sending messages b. Account recovery
c. Deleting files d. Logging out

18 📖 To log out of your Gmail account, click on the .... icon.

a. Sign in b. Sign out c. Shutdown d. Close

19 Signing out of Gmail is done by clicking on ....

a. Inbox icon b. Settings icon
c. Profile picture icon d. Compose button

20 There are many free email providers available such as ....

a. Gmail b. Yahoo Email
c. Hotmail/Outlook d. All of them

2 Put (✓) or (✗):

1. Email is one of the cloud computing tools. (   )
2. An email address consists of two main components: the user name and the domain name. (   )
3. Email is one of the direct communication tools. (   )
4. The symbol @ separates the user name from the domain name (   )
5. The user name is located at the end of the email address. (   )

6. To create a Google Account, you need to provide your first name, last name, and username. ( )
7. Gmail, Yahoo Mail, and Hotmail/Outlook are examples of free email service providers. ( )
8. In email, the user name can be repeated by anyone else. ( )
9. You must create a Google Account to access Gmail services. ( )
10. From disadvantages of using email is the high cost. ( )
11. Sending and receiving messages through email is very quickly. ( )
12. From advantages of using email to receive fraudulent messages. ( )
13. Email is free in most cases. ( )
14. Emails sent through Gmail are completely secure and cannot be hacked. ( )
15. It is necessary to check and confirm your email address when creating a Google Account. ( )
16. When setting an e-mail password, make sure it is easy to guess. ( )
17. In your Gmail, you can change the language into Arabic ( )
18. A Google account allows access only to Gmail but not YouTube. ( )

3 The email address consists of:

1. ....
2. ....
3. ....

4 Complete :

1. From advantages of using email are ...., ..., ... and ....
2. From drawbacks of using email are ...., ..., ... and ....
3. ...., ... and .... are from email providers.
4. A Google account consists of a .... and a ....
5. To establish a Google account, choose ....



Cloud Computing

Cloud Computing

- It is a model for providing digital services over the internet, such as:
  1. **Cloud Storage Service (Computer Storage):** It's storing files and folders over the internet.
  2. **Software Service (Applications) over the Internet:** It's making software (applications) available over the internet.
  3. **Electronic Resource Sharing Service:** It's sharing and exchanging files with others over the internet.

- **الحوسبة السحابية:** هي نموذج لتقديم الخدمات الرقمية عبر الإنترنت، مثل:
  1. خدمة التخزين السحابي: هي تخزين الملفات والمجلدات عبر الإنترنت.
  2. خدمة البرمجيات (التطبيقات) عبر الإنترنت: هي إتاحة استخدام البرمجيات (التطبيقات) عبر الإنترنت.
  3. خدمة مشاركة المصادر الإلكترونية: هي مشاركة الملفات وتبادلها مع الآخرين عبر شبكة الإنترنت.

Benefits of Cloud Computing

1. **Ease of access:** Cloud computing services can be accessed without the need for a high-specification computer or mobile device, whether for hardware or software components.
2. **Service availability:** Users can access their data, files, and applications from anywhere where the internet service is available.
3. **Reducing material costs:**
   - There is no need to purchase software licenses.
   - There is no need to purchase high-specification hardware.
4. **Sharing digital resources with others.**

- **فوائد الحوسبة السحابية:**
  1. سهولة الوصول: يمكن الحصول على خدمات الحوسبة السحابية دون الحاجة إلى امتلاك جهاز كمبيوتر أو هاتف محمول بمواصفات عالية، سواء كمكونات مادية أو برمجية.
  2. توافر الخدمة: يمكن للمستخدم الدخول على بياناته وملفاته وتطبيقاته من أي مكان تتوافر فيه خدمة الإنترنت.
  3. تخفيض التكاليف المادية:
     - ليس هناك حاجة إلى شراء تراخيص للبرمجيات.
     - ليس هناك حاجة لشراء مكونات مادية ذات مواصفات عالية.
  4. مشاركة المصادر الرقمية مع الآخرين.



Applications of Cloud Computing in Daily Life
تطبيقات الحوسبة السحابية في الحياة اليومية

Some examples of cloud computing applications in daily life include:

1 Communication:

- **Email:** We use cloud email services like Gmail, Outlook, and Yahoo Mail daily allows for easy communication with family, friends, and colleagues.
- **Social networking:** We communicate with others and share content on social media platforms like Facebook, Twitter, and Instagram.
- **Messaging services:** We use messaging applications like WhatsApp and Telegram to communicate and share files and photos.

التواصل:

- البريد الإلكتروني: نستخدم البريد الإلكتروني السحابي مثل: Gmail و Outlook و Yahoo Mail بشكل يومي؛ للتواصل مع العائلة والأصدقاء والزملاء.
- شبكات التواصل الاجتماعي: نتواصل مع الآخرين ونشارك المحتوى على منصات التواصل الاجتماعي مثل: Facebook و Twitter و Instagram.
- خدمات المراسلة: نستخدم تطبيقات المراسلة مثل: WhatsApp وTelegram؛ للتواصل ومشاركة الملفات والصور.

2 Computer Storage:

- **File storage services:** We use services like Google Drive and OneDrive to store, share, and access files anytime and anywhere.
- **Data backup:** We use cloud backup services to protect data against loss in case of device damage.

التخزين الحوسبي:

- خدمات تخزين الملفات: نستخدم خدمات مثل: Google Drive وOne Drive؛ لتخزين الملفات ومشاركتها والوصول إليها في أي وقت ومن أي مكان.
- نسخ البيانات احتياطيًّا: نستخدم خدمات النسخ الاحتياطي السحابي؛ لحماية بياناتنا من فقدانها في حال حدوث أي تلف في أجهزتنا.





3 Producing projects by using:

- **Word Processing Programs:** We use cloud word processing programs like Google Docs and Microsoft Word Online to create, edit, and share documents with others.
- **Spreadsheets:** We use cloud spreadsheets like Google Sheets and Microsoft Excel Online to organize, analyze data, and create charts.

إنتاج المشاريع باستخدام:

- برامج معالجة النصوص: نستخدم برامج معالجة النصوص السحابية مثل: Google Docs وMicrosoft Word Online؛ لإنشاء وتحرير المستندات ومشاركتها مع الآخرين.
- جداول البيانات: نستخدم جداول البيانات السحابية مثل: Google Sheets وMicrosoft Excel Online؛ لتنظيم البيانات وتحليلها وإنشاء الرسوم البيانية.

4 Education:

- **E-learning platforms:** We use e-learning platforms to access educational materials and interact with teachers and students, such as the Ministry of Education platform.
- **Collaboration tools:** We use cloud collaboration tools like Google Classroom and Microsoft Teams to work on projects and tasks with others.

التعليم:

- منصات التعلم الإلكتروني: نستخدم منصات التعلم الإلكتروني للوصول إلى المواد التعليمية والتفاعل مع المعلمين والطلاب مثل منصة وزارة التربية والتعليم.
- أدوات التعاون: نستخدم أدوات التعاون السحابية مثل: Google Classroom وMicrosoft Teams؛ للعمل على المشاريع والمهام مع الآخرين.

5 Entertainment:

- **Video streaming services:** We enjoy watching movies, TV shows, and programs on video streaming services like YouTube.
- **Online video games:** We play video games online on cloud platforms.
- **Cloud music services**

الترفيه:

- خدمات بث الفيديو: نستمتع بمشاهدة الأفلام والبرامج التلفزيونية على خدمات بث الفيديو مثل YouTube.
- ألعاب الفيديو: نلعب ألعاب الفيديو عبر الإنترنت على المنصات السحابية.
- خدمات الموسيقى السحابية.





6 Other areas:

- **Online shopping:** We shop through e-commerce websites.
- **Online banking:** We use online banking to transfer money and pay bills.
- **Healthcare services:** We use cloud computing to store medical records.

مجالات أخرى:

- التسوق الإلكتروني: نتسوق من خلال مواقع التجارة الإلكترونية.
- الخدمات المصرفية عبر الإنترنت: نستخدم الخدمات المصرفية عبر الإنترنت لتحويل الأموال ودفع الفواتير.
- خدمات الرعاية الصحية: يتم استخدام الحوسبة السحابية لتخزين السجلات الطبية.

Data Processing and Storage in Cloud Computing

- Data processing and storage in cloud computing depends on a huge infrastructure.
- The steps for data processing and storage in cloud computing can be summarized as follows:

1. **Data Collection:** From different sources.
2. **Data Transfer:** To cloud data centers.
3. **Data Processing:** In cloud data centers through powerful servers.
4. **Data Storage:** Storing data on high-capacity storage units in cloud data centers.
5. **Data Management:** Data is managed by database management systems in cloud data centers.
6. **Data Access:** Data can be accessed by users and applications through the internet.

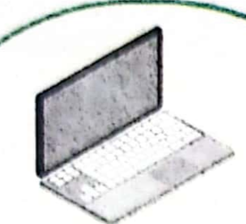
تعتمد معالجة البيانات وتخزينها في الحوسبة السحابية على بنية تحتية ضخمة. يمكن تلخيص خطوات معالجة البيانات وتخزينها في الحوسبة السحابية في التالي:

1. جمع البيانات: من مصادر مختلفة.
2. نقل البيانات: إلى مراكز البيانات السحابية.
3. معالجة البيانات: في مراكز البيانات السحابية، ومن خلال خوادم كمبيوتر قوية.
4. تخزين البيانات: يتم تخزين البيانات على وحدات تخزين عالية السعة في مراكز البيانات السحابية.
5. إدارة البيانات: يتم إدارة البيانات بواسطة أنظمة إدارة قواعد البيانات في مراكز البيانات السحابية.
6. الوصول إلى البيانات: يمكن الوصول إلى البيانات من قِبَل المستخدمين والتطبيقات من خلال الإنترنت.











Requirements to Obtain Cloud Computing Services

متطلبات يجب توافرها للحصول على خدمات الحوسبة السحابية

1. A computer or mobile device
جهاز كمبيوتر أو هاتف محمول.

2. An internet browser or application
متصفح إنترنت أو تطبيق.

3. An internet connection
الاتصال بشبكة الإنترنت.





4. An account with one of the computing service providers
عمل حساب لدى أحد موفري خدمات الحوسبة.



The most famous cloud computing service providers

أشهر مزودي خدمات الحوسبة السحابية

- Amazon Web Services
- Microsoft Azure
- Google Cloud Platform





اهم الكلمات والمصطلحات

Cloud computing	الحوسبة السحابية	Spreadsheets	جداول البيانات	Digital services	الخدمات الرقمية
E-learning platforms	منصات التعلم الإلكتروني	Cloud storage	التخزين السحابي	Collaboration tools	أدوات التعاون
Software service	خدمة البرامج	Video streaming	بث الفيديو	Resource sharing	مشاركة الموارد
Online shopping	التسوق عبر الإنترنت	Ease of access	سهولة الوصول	Online banking	الخدمات المصرفية عبر الإنترنت
Service availability	توفر الخدمة	Data processing	معالجة البيانات	Reducing costs	تقليل التكاليف
Data storage	تخزين البيانات	Cloud email	بريد إلكتروني سحابي	Data centers	مراكز البيانات
Social networking	الشبكات الاجتماعية	Database management	إدارة قواعد البيانات	Messaging services	خدمات الرسائل
Cloud music	الموسيقى السحابية	Data backup	نسخ احتياطي للبيانات	Microsoft Azure	مايكروسوفت أزور
Word processing	معالجة النصوص	Google Cloud	سحابة جوجل		



Exercises on Lesson 6

1 Choose the correct answer:

1. 📖 Cloud computing is known as a model for providing ....
   a. presentations b. digital services over the internet
   c. Google Docs d. Google Classroom

2. Benefits of cloud computing include ....
   a. ease of access b. availability of the service
   c. reducing material costs d. all of them

3. 📖 We use cloud word processing programs, such as ....
   a. Google Docs b. Google Sheets
   c. Google Classroom d. Google Cloud Platform

4. 📖 We use cloud spreadsheets, such as ....
   a. Google Docs b. Google Sheets
   c. Google Classroom d. Google Cloud Platform

5. Examples of areas of using cloud computing applications in daily life include ....
   a. data backup b. communication
   c. both a and b d. none of them

6. .... is a model for providing digital services over the internet.
   a. Cloud computing b. Domain name
   c. Sensor d. None of them

7. The first step in cloud data processing is ....
   a. data storage b. data collection
   c. data management d. data access

8. 📖 The computer storage service is used for ....
   a. storing files and folders locally on the computer
   b. storing files and folders over the internet
   c. sharing and exchanging files d. Google Classroom

9 📖 The software and application services over the internet are used for ....

a. enabling the use of software and applications over the internet
b. enabling the use of software and applications without the internet
c. sharing and exchanging files locally
d. email services

10 📖 The service of sharing electronic resources via cloud computing is known as ....

a. computer storage
b. email sharing
c. sharing files and folders locally on the computer
d. sharing and exchanging files with others over the internet

11 📖 Communication is one of the areas of using cloud computing in daily life, and is done through ....

a. email
b. software and applications
c. computer storage
d. Google Sheets

12 📖 Services for storing, sharing, and accessing files at any time and from anywhere are called ....

a. emails
b. software and applications
c. computing storage
d. Google Sheets

13 📖 We use cloud collaboration tools, such as ....

a. Google Docs
b. Google Sheets
c. Google Classroom
d. Google Cloud Platform

14 Cloud data processing and storage occur in ....

a. personal computers
b. cloud data centers
c. local devices
d. internet browsers

15 Online shopping is an example of using cloud computing for ....

a. data processing
b. entertainment
c. e-commerce
d. data storage

16 We use .... to transfer money and pay bills.

a. online shopping
b. Microsoft Teams
c. online banking
d. video games

17 The most famous cloud computing service providers are ....

a. Google Docs
b. Google Sheets
c. Google Classroom
d. Google Cloud Platform

18 Cloud computing reduces costs by ....

a. requiring software licenses
b. requiring expensive hardware
c. eliminating the need for high-specifications devices
d. increasing hardware costs

19 Cloud computing in healthcare is used to ....

a. transfer money
b. play video games
c. store medical records
d. stream music

20 Which of these is NOT an area where cloud computing is used?

a. Social networking
b. Local file storage
c. Video streaming
d. Online banking

21 Cloud-based word processing programs include ....

a. Google Sheets
b. Microsoft Word Online
c. Adobe Photoshop
d. Excel Online

2 Put (✓) or (✗):

1 Cloud computing is a model for providing digital services over the internet. ( )

2 An internet connection is required to access cloud computing services. ( )

3 Cloud storage services allow users to store files and folders online. ( )

4 Cloud computing requires high-specification hardware to be accessed. ( )

5 Cloud computing services can be accessed from anywhere with an internet connection. ( )

6 Using cloud computing does not reduce material costs for users. ( )

7 Gmail, Outlook, and Yahoo Mail are examples of cloud email services. ( )

8 Social networking platforms like Facebook and Twitter do not use cloud computing. ( )

9 Google Drive and OneDrive are examples of cloud storage services. ( )

10 Cloud computing cannot be used for data backup. ( )

11 Google Docs and Microsoft Word Online are cloud-based word processing programs. ( )

12 Cloud computing does not support e-learning platforms. ( )

13 Video streaming services like YouTube are examples of cloud computing applications. ( )

14 Cloud computing is not used in healthcare services. ( )

15 Google Classroom and Microsoft Teams are used for playing games with others. ( )

16 Amazon Web Services, Microsoft Azure, and Google Cloud Platform are famous cloud computing service providers. ( )

17 Google Sheets and Microsoft Excel Online are used to organize, analyze data, and create charts. ( )

18 To obtain cloud computing services, create an account with a service provider. ( )

3 Complete the missing parts using the words between the brackets:

{Cloud storage service – cloud backup services – messaging applications – e-learning platforms – an internet connection}

1 We use ...., such as WhatsApp and Telegram, to communicate and share files and photos.

2 We use .... to access educational materials and interact with teachers and students, such as the Ministry of Education platform.

3 .... is storing files and folders over the internet.

4 We need .... to obtain cloud computing services.

5 We use .... to protect our data from loss in case any damage happening to our devices.





4 Write 3 benefits of cloud computing:

1 ....

2 ....

3 ....

5 Write 3 areas of using cloud computing in daily life:

1 ....

2 ....

3 ....

6 Write the steps for processing and storing data in cloud computing:

1 ....

2 ....

3 ....

4 ....

5 ....

6 ....





1 Choose the correct answer:

1. Cloud computing reduces costs by ....
   a. requiring software licenses b. requiring expensive hardware
   c. eliminating the need for high-specifications devices
   d. increasing hardware costs
2. Which of these is NOT an area where cloud computing is used?
   a. Social networking b. Local file storage
   c. Video streaming d. Online banking
3. Email is primarily used to ....
   a. store files b. send and receive messages
   c. play games d. browse websites
4. An email address consists of .... main component(s).
   a. one b. two c. three d. four
5. Which of these is NOT a free email service provider?
   a. Gmail b. Yahoo Mail c. Outlook d. Microsoft Word
6. Cloud-based word processing programs include ....
   a. Google Sheets b. Microsoft Word Online
   c. Adobe Photoshop d. Excel Online
7. To start the process of creating a Google account, you should first ....
   a. sign out b. download a file c. click Sign in d. access your inbox
8. The first step in cloud data processing is ....
   a. data storage b. data collection
   c. data management d. data access

2 Put (✓) or (✗):

1. Google Docs and Microsoft Word Online are cloud-based word processing programs. ( )
2. The speed of sending and receiving emails is generally very slow. ( )
3. Data can be accessed by users and applications in cloud computing without the internet. ( )
4. Cloud computing is not used in healthcare services. ( )
5. Cloud computing is a model for providing digital services over the internet. ( )
6. After signing out of your Gmail account, you need to click on the "Settings" icon. ( )
7. Emails are considered one of the most indirect means of communication. ( )



Google Meet and Project Management

- In previous lessons, you learned about some digital transformation tools, including collaboration and direct communication tools for video calls and online conferences, enabling you to exchange data, information, ideas, and producing projects.
- These tools enable face-to-face communication with others.
- One example is the Google Meet application, a service offered by Google.
- To access Google Meet, you'll need a Google account.

تعرفت في الدروس السابقة على بعض أدوات التحول الرقمي، والتي منها أدوات التعاون والتواصل المباشر بين المستخدمين لإجراء مكالمات فيديو ومؤتمرات عبر الإنترنت؛ لتبادل البيانات والمعلومات والأفكار ولإنتاج المشروعات؛ حيث يمكنك استخدامها للاتصال بالآخرين وجهًا لوجه ومن أمثلتها تطبيق «Google Meet»، وهو أحد الخدمات المقدمة من قِبَل شركة Google، ولكي يُمكنك الوصول الى خدمة «Google Meet» يجب أن يكون لديك حساب جوجل «Google account»، والذي سبق وقمت بإنشائه في الدرس الرابع.

Google Meet

It is a video conferencing service developed by Google.

- هو خدمة مؤتمرات الفيديو التي طورتها شركة Google.



Google Meet allows users to

جوجل ميت يتيح للمستخدمين

- conduct group video calls. إجراء مكالمات فيديو جماعيه.
- share screens. مشاركة الشاشات.
- chat. الدردشة.
- collaborate in real-time. التعاون في الوقت الفعلي بطريقة مباشرة.
- work together on joint projects among students. العمل معًا في مشاريع مشتركة بين الطلاب.

How to Access Google Meet?



1 From a PC via the link: https://meet.google.com
2 By downloading the "Google Meet" app for Android devices using the Google Play Store.

كيف يمكنك الوصول إلى «Google Meet»؟

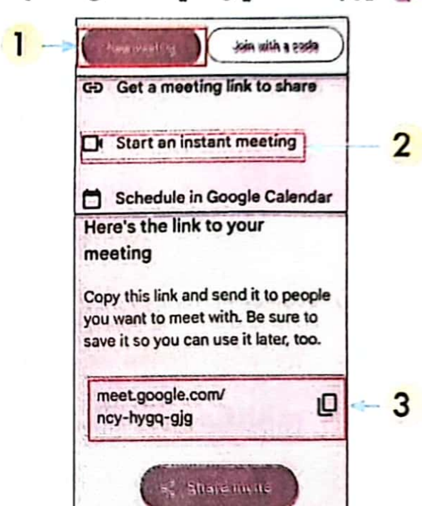
1 من جهاز الكمبيوتر PC من خلال الرابط (https://meet.google.com).
2 من خلال تنزيل تطبيق «Google Meet» لأجهزة أندرويد باستخدام متجر جوجل بلاي.

Creating a Meeting on Google Meet

» There are several options for creating a meeting on Google Meet.

« يوجد عدة خيارات يُمكنك من خلالها عقد اجتماع.

1 Starting an Instant Meeting:



1 Go to the main page of the "Google Meet" application.
2 Click on the "New meeting" button.
3 Click on "Start an instant meeting."
4 Click on the "Copy" icon ⧉ to share the meeting link.
5 Send the meeting link to participants via communication tools (Email, WhatsApp, etc.).

بدء اجتماع فوري:

1 الانتقال إلى الصفحة الرئيسية للتطبيق «Google Meet».
2 الضغط على زر «اجتماع جديد».
3 الضغط على «بدء اجتماع فوري».
4 الضغط على «نسخ» لمشاركة رابط الاجتماع.
5 إرسال رابط الاجتماع إلى المشاركين عن طريق إحدى أدوات التواصل (البريد الإلكتروني - واتساب WhatsApp ...).

2 Creating a Meeting for a Later Time:

- The "Google Meet" application also enables you to create a meeting for a later time, and keep its link until the time you want to meet with whomever you want to invite to attend:
  1 Follow the same previous steps to create an instant meeting.
  2 Click on "Create a meeting for a later time".
  3 A small window will appear with a link to the session.
  4 Copy the meeting link.
  5 Send the link to the people you want to invite to the meeting.



- Sometimes, you may need to **approve** the invitees' requests to join the session.
- When an invitee tries to join your session, a notification will appear at the top of the page, through which you can accept or reject their request.

إنشاء اجتماع لوقت لاحق:

• يُمكّنك تطبيق «Google Meet» من إنشاء اجتماع لوقت لاحق، والاحتفاظ برابطه إلى الوقت الذي ترغب فيه بالاجتماع مع من تريد دعوته للحضور:

1. اتبع نفس الخطوات السابقة لإنشاء اجتماع فوري.
2. انقر على «إنشاء اجتماع لوقت لاحق».
3. ستظهر نافذة صغيرة تضم رابطًا للجلسة.
4. انسخ رابط الاجتماع.
5. أرسل الرابط إلى الأشخاص الذين تريد عقد الاجتماع معهم.

• في بعض الأحيان، قد تحتاج إلى الموافقة على طلب انضمام المدعوين إلى الجلسة، بعبارة أخرى: عندما سيحاول المدعو الوصول إلى جلستك، سيظهر لك إشعار أعلى الصفحة يُمكنك من خلاله قبول أو رفض انضمام الشخص.

3 Joining a Meeting on Google Meet:

- If you are invited to a meeting in Google Meet via a link:
  1. You can join the session by clicking on the link directly.
  2. Sometimes, when you click on the meeting link, it may take some time to join until the meeting organizer approves your request to join the meeting.
  3. If you are invited to a meeting via a link, do not share the meeting link with others without the meeting owner's permission.

الانضمام لحضور اجتماع: • إذا تمت دعوتك لحضور جلسة اجتماع في «Google Meet» باستخدام رابط:

1. إذا تم إرسال الرابط إليك للانضمام إلى جلسة على «Google Meet»، فيُمكنك الوصول إلى الجلسة عن طريق النقر على الرابط مباشرة.
2. في بعض الأحيان، عند النقر على رابط الاجتماع، قد يستغرق الانضمام بعض الوقت إلى حين الموافقة على طلب الانضمام للاجتماع من طرف مُنظم الاجتماع.
3. إذا تمت دعوتك لحضور اجتماع ما من خلال رابط، فلا يجب إرسال رابط الاجتماع إلى شخص آخر. ويجب استئذان صاحب الاجتماع.

4 During a Google Meet Meeting:

- Whether you are the organizer or an invitee, you can use many options and features that help you follow the meeting in an organized, enjoyable, and useful atmosphere. If you're the organizer, you'll also have the ability to manage the session and control invitees.

أثناء الاجتماع: • أثناء اجتماع «Google Meet»، وسواء كنت مُنظمًا أو مدعوًا، يُمكنك استخدام العديد من الخيارات والمميزات التي تساعد على متابعة الاجتماع في جو منظم ممتع مليء بالفائدة، مع إمكانيات التحكم بالجلسة والمدعوين في حال كنت المُنظم.





General Rules to Follow During the Meeting

- While one participant is speaking, others should listen and mute their microphones.
- Raising your hand to ask to speak helps organize the sessions, talk, and intervene in an organized and smooth manner.
- When you are allowed to speak, the microphone icon will open and you can speak.



قواعد عامة يجب اتباعها أثناء الاجتماع:

- أثناء تحدث أحد المشاركين يجب على باقي المشاركين الإنصات والاستماع وغلق الميكروفون.
- رفع اليد في الجلسة لطلب التحدث تساعد على تنظيم الجلسات والحديث والتدخل بشكل مُنظَّم وسلس.
- وعندما يُسمح لك بالتحدث يتم فتح أيقونة الميكروفون والتحدث.

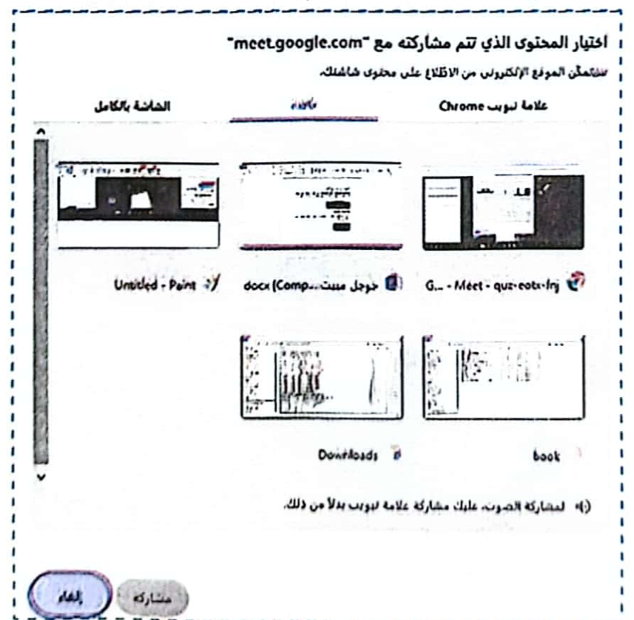
Sending messages during the session:

- You can communicate with attendees by sending messages to participants by clicking on the "In-call messages" icon at the bottom of the page.

إرسال رسائل في الجلسة إلى المشاركين: • بينما أنت في جلسة، يُمكنك التواصل مع الحضور من خلال إرسال رسائل إلى المشاركين في الجلسة عن طريق النقر على أيقونة «الرسالة» In-call messages في الجهة السفلى للصفحة.

Sharing the presentation with participants:

- You can share your entire screen or a window with participants.
- At the bottom of the page, click on the "Share screen" icon, then select one of the tabs (Entire screen, Window, or Tab).



مشاركة العرض مع المشاركين: يُمكنك مشاركة شاشتك بأكملها مع المشاركين أو نافذة معينة في أسفل الصفحة، انقر على رمز «مشاركة العرض» Share screen، الآن انقر على أحد التبويبات (الشاشة بالكامل أو نافذة أو علامة تبويب).

Stop sharing a presentation:

- In the Google Meet window, click "Stop sharing."



إيقاف مشاركة العرض: في نافذة Google Meet، انقر على «إيقاف مشاركة العرض».

أهم الكلمات والمصطلحات

Digital transformation	التحول الرقمي	Google account	حساب جوجل
Collaboration tools	أدوات التعاون	Start an instant meeting	بدء اجتماع فوري
Direct communication	الاتصال المباشر	Create a meeting	إنشاء اجتماع
Video calls	مكالمات الفيديو	Meeting link	رابط الاجتماع
Online conferences	المؤتمرات عبر الإنترنت	Join the session	الانضمام إلى الجلسة
Exchange data	تبادل البيانات	Raise your hand	رفع يدك
Share screens	مشاركة الشاشات	Share screen	مشاركة الشاشة
Real-time collaboration	التعاون في الوقت الفعلي	Send messages	إرسال الرسائل
Google Meet	جوجل ميت	Stop sharing	إيقاف المشاركة

Exercises on Lesson 7

1 Choose the correct answer:

1. 📖 Google Meet is a/an ....
   a. audio-only service
   b. voice-only service
   c. storage service
   d. video conferencing service

2. 📖 To access the Google Meet service, you must have a/an ....
   a. Yahoo account
   b. Google account
   c. bank account
   d. electronic wallet

3. Which of the following is NOT a feature of Google Meet?
   a. Group video calls
   b. Screen sharing
   c. Document editing
   d. Real-time chat

4. 📖 Through ...., you can make calls, group video, share screens, and chat.
   a. Google Account
   b. Google Docs
   c. Google Meet
   d. Google Drive

5. To start an instant meeting in Google Meet, you first click on ....
   a. "Join meeting"
   b. "New meeting"
   c. "End meeting"
   d. "Schedule meeting"

6. 📖 The Google Meet application is considered one of the ways of .... communication.
   a. indirect
   b. direct
   c. slow
   d. difficult

7. If you want to schedule a meeting for a later time, you should click on ....
   a. "Start now"
   b. "Create a meeting for later"
   c. "Join meeting"
   d. "End meeting"

8. 📖 One of Google Meet features is ....
   a. sharing screens
   b. talking at any time
   c. indirect communication
   d. slow communication for audio and video

9 To express your opinion in an organized manner during a Google Meet meeting, you can ....

a. click on the meeting link
b. click on the hand icon
c. talk at any time
d. exit before the end of the meeting

10 One of the general rules that must be followed during the meeting is ....

a. talking at any time
b. listening, hearing, and turning off the microphone
c. giving the meeting link to anyone
d. leaving before the end of the meeting

11 To invite others to a Google Meet meeting, you must send them ....

a. the meeting address
b. the meeting link
c. the meeting image
d. your home address

12 To create a meeting next week through Google Meet, you should choose "...............".

a. Start an instant meeting
b. Meeting for a later time
c. Stop sharing the presentation
d. Sharing screens

13 If you have been invited to a Google Meet meeting, to join the meeting, you must click on ....

a. the meeting address
b. the meeting link
c. the meeting image
d. your home address

14 To express your opinion in an organized manner during a Google Meet meeting, you can ....

a. speak at any time
b. leave before the meeting ends
c. send a message
d. stop sharing the presentation

15 When you are invited to a meeting through a link, you should ....

a. not send the meeting link to others
b. speak without permission
c. send the meeting link to anyone
d. leave the meeting



16 📖 When you finish showing your screen during the meeting, you should ....

a. not send the meeting link to others
b. talk without permission
c. click "Stop sharing the presentation"
d. share the screen

17 📖 To organize a Google Meet meeting, when speaking, you should ....

a. speak at any time
b. raise your hand
c. leave the meeting
d. send the meeting link to others

18 📖 To help keep the sessions organized, you should talk and intervene in an organized and smooth manner, and ....

a. leave the meeting
b. listen to the speaker
c. speak at any time
d. open the microphone

19 You can access Google Meet via ....

a. the link https://meet.google.com.
b. Google Play Store
c. both a and b
d. none of them

20 The Google Meet link can be shared with participants via ....

a. Email or WhatsApp
b. printed invitations
c. SMS only
d. postcards

2 Put (✓) or (✗):

1 Google Meet is a video conferencing service developed by Google. ( )

2 To access Google Meet, you must have a Microsoft account. ( )

3 Google Meet allows users to make video calls and share screens in real time. ( )

4 You can access Google Meet from a PC via the link https://meet.google.com. ( )

5 The Google Meet app is available for download on iPhone via the Google Play Store. ( )

6 To create a meeting in Google Meet, you must first click on the "Join meeting" button. ( )

7 Google Meet provides an option to create a meeting for a later time ( )

8. When invited to a Google Meet session, you can join by clicking on the provided link. (
9. It is acceptable to share the Google Meet link with others without asking the meeting owner's permission. (
10. During a Google Meet meeting, participants should turn off their microphones when someone else is speaking. (
11. You can send messages to participants during a Google Meet session using the "In-call messages" icon. (
12. The first step to start an instant meeting on Google Meet is to send the meeting link to the participants. (
13. Google Meet does not allow users to share their screens during a meeting. (
14. The "Stop sharing" option in Google Meet is used to end the screen sharing during a meeting. (
15. Raising your hand in a Google Meet session helps organize the discussion and ensures smooth communication. (
16. Meetings on Google Meet require participants to be in the same location to join. (
17. In Google Meet, you can click on the meeting link and wait until the organizer approves your request. (

3 Complete the missing parts using the words between the brackets:

{Google Meet – Hand icon – Stop sharing – In-call messages – Google Meet link}

1. When you finish sharing your screen, click on ....
2. You can communicate with attendees by clicking the .... icon.
3. .... is a video conferencing service developed by Google.
4. You can access Google Meet by clicking on the ....
5. To express your opinion during a Google Meet meeting, click on the ....

Lesson 8

Databases Design

- In previous classes, we studied the concept of databases and how to use:
  1. a spreadsheet program to perform simple mathematical operations.
  2. MS Word for preparing your CV and writing reports for your teacher.
- In this lesson, we will explore **Microsoft Access**, one of the Office suite programs, which enables you to create and manage databases.

- درسنا في الصفوف السابقة مفهوم قواعد البيانات، وكيفية استخدام برنامج الجداول الحسابية، وإجراء بعض المعاملات الحسابية البسيطة عليه، وبرنامج معالج الكلمات Word في إعداد السيرة الذاتية لك أو كتابة تقارير لمعلمك.
- وفي هذا الدرس، سوف نتناول أحد برامج حزمة الأوفيس Access؛ حيث يُمكّنك من إنشاء وإدارة قواعد البيانات.

Database

- It is a collection of data and information organized and linked to each other.
- It is similar to a library in which books are kept, but instead of books, data and information are stored.

• **قاعدة البيانات:**

هي مجموعة من البيانات والمعلومات المنظمة والمرتبطة مع بعضها البعض. تشبه المكتبة التي تحفظ بها الكتب، لكن بدلًا من الكتب، تخزن البيانات والمعلومات.

- A database is used to **store** and **retrieve** information easily and efficiently.
- Information is stored and managed digitally using dedicated programs and applications.

- تستخدم قواعد البيانات لحفظ المعلومات واسترجاعها بسهولة وكفاءة.
- يتم تخزين المعلومات وإدارتها بشكل رقمي باستخدام برامج وتطبيقات مخصصة.



Importance of Databases in Our Lives

1. **Saving students' information at school:** such as names, dates of birth, and home addresses, etc.
2. **Saving medical records in hospitals:** including information like the patient's name, address, attending physician's name, and the date of patient's last visit.
3. **Tracking inventory in stores:** such as the product name, manufacturer, manufacturing date, and price.

1 حفظ بيانات الطلاب في المدرسة مثل: الاسم - تاريخ الميلاد - عنوان السكن.
2 حفظ السجلات الطبية في المستشفيات مثل: اسم المريض - عنوان السكن - اسم الطبيب المعالج - تاريخ آخر زيارة للمريض.
3 تتبع المخزون في المتاجر مثل: اسم المنتج - الشركة المصنعة - تاريخ التصنيع - السعر.

Advantages of Using Databases

- **Organization:** Easy storage and retrieval of data
- **Efficiency:** Quick access to data
- **Accuracy:** Ensuring data correctness and reducing errors
- **Security:** Protecting data from unauthorized access
- **Sharing:** Making data available to multiple users

- التنظيم: سهولة تخزين البيانات واسترجاعها.
- الكفاءة: الوصول السريع إلى البيانات.
- الدقة: ضمان صحة البيانات وتقليل الأخطاء.
- الأمان: حماية البيانات من الوصول غير المصرح به.
- المشاركة: إتاحة البيانات لمستخدمين متعددين.

Uses of Databases

- **Websites:** such as storing user and product data
- **Data analysis:** such as analyzing big data and extracting knowledge
- **Scientific research:** such as storing and analyzing experimental data.
- **Business applications:** such as customer relationship management systems and enterprise resource planning systems.

- المواقع الإلكترونية: مثل تخزين بيانات المستخدمين والمنتجات.
- تحليل البيانات: مثل تحليل البيانات الضخمة واستخراج المعرفة.
- البحث العلمي: مثل تخزين البيانات التجريبية وتحليلها.
- التطبيقات التجارية: مثل أنظمة إدارة علاقات العملاء، وأنظمة تخطيط موارد المؤسسة.



Big Data

- Big Data refers to **very large** and **diverse** sets of structured, unstructured, and semi-structured data that continue to **grow** significantly over time.
- These data sets are so large and complex in terms of size, growth rate, and diversity that traditional data management systems cannot store, process, and analyze them.
- The amount of data is increasing rapidly due to the rapid development of digital technology, such as Artificial Intelligence (AI) and the Internet of Things (IoT).
- As data continues to increase, expand and spread, new big data tools emerge to help companies collect, process, and analyze data at the speed needed to get the most out of it.

• البيانات الضخمة:

تشير إلى مجموعات كبيرة للغاية ومتنوعة من البيانات المنظمة وغير المنظمة وشبه المنظمة التي تستمر في النمو بشكل كبير مع مرور الوقت.

• مجموعات البيانات هذه ضخمة جدًّا ومعقدة من حيث الحجم وسرعة النمو والتنوع، بحيث لا تستطيع أنظمة إدارة البيانات التقليدية تخزينها ومعالجتها وتحليلها.

• تتزايد كمية البيانات وتنمو بسرعة نتيجة للتطور السريع للتكنولوجيا الرقمية، مثل: الذكاء الاصطناعي (AI)، وإنترنت الأشياء (IOT)، ومع استمرار زيادة وتوسع البيانات وانتشارها، تظهر أدوات جديدة للبيانات الضخمة لمساعدة الشركات على جمع البيانات ومعالجتها وتحليلها بالسرعة اللازمة؛ للحصول على أكبر استفادة منها.

Data Table

- **A spreadsheet** is a basic element in building databases and is the only source of data within a database.
- A spreadsheet consists of **rows** and **columns**.
- Each row represents a single record of data.
- Each column represents a specific field of data.

• جدول البيانات:

- هو عنصر أساسي في بناء قواعد البيانات، وهو المصدر الوحيد للبيانات داخل قاعدة البيانات.
- يتكوّن جدول البيانات من صفوف وأعمدة؛ حيث يمثل كل صف سجلًا واحدًا من البيانات، وكل عمود يمثل حقلًا معينًا من البيانات.



Creating a Data Table

Many programs can create spreadsheets, such as a "Students Grades" spreadsheet.

إنشاء جدول البيانات:

يمكن من خلال العديد من البرامج إنشاء جداول بيانات، مثل جدول بيانات «درجات الطلاب».

No.	Student Name	Arabic Grade	English Grade	Computer Grade
1	Amr	19	18	19
2	Yassmin	20	17	16
3	Ramy	15	19	14
4	Samar	17	18	16

Programs Used to Create a Spreadsheet

- Using Word and Excel, you can create a "Students Grades" spreadsheet.
- **In Word**, you can create a simple table but cannot get a record of all students whose names include the letter "Y". Word is used for creating simple spreadsheets.
- **In Excel**, you can arrange and sort students' grades and perform simple calculations.
- But Excel is difficult to use if you have a large amount of complex data.

برامج إنشاء جدول بيانات «درجات الطلاب»:

- من خلال برنامج Word وبرنامج Excel يمكن إنشاء جدول بيانات «درجات الطلاب».
- في برنامج Word يمكن إنشاء جدول بسيط، ولكن لا تستطيع الحصول على سجل بيانات كل الطلاب الذين يتضمن أسماؤهم حرف «ي»، فبرنامج Word يستخدم لعمل جداول بيانات بسيطة.
- وفي برنامج Excel يمكن ترتيب وفرز درجات الطلاب وإجراء عمليات حسابية بسيطة.
- ولكن برنامج Excel من الصعب استخدامه إذا كان لديك كمية كبيرة من البيانات المعقدة.





Microsoft Access

- It is an application used to create databases.
- It builds a real database.
- It allows you to build a complex data structure and manage it more efficiently.

• هو أحد التطبيقات التي تستخدم لإنشاء قواعد البيانات، فهو يبني قاعدة بيانات حقيقية؛ حيث يمكنك بناء هيكل معقد للبيانات وإدارتها بشكل أكثر كفاءة.



When do we use Microsoft Access?

We use Microsoft Access when:

- You have a large amount of complex data.
- You need to create relations between data.
- You want to create custom applications to manage data.
- You need higher data security.

نستخدم برنامج Microsoft Access عندما:

- يكون لديك كمية كبيرة من البيانات المعقدة.
- تحتاج إلى إنشاء علاقات بين البيانات.
- تريد إنشاء تطبيقات مخصصة لإدارة البيانات.
- تحتاج إلى أمان أعلى للبيانات.

Creating a "Students Results" Database

You can create a database named "Students Results" by following these steps on your computer:

إنشاء قاعدة بيانات باسم نتائج الطلاب:

• يمكنك إنشاء قاعدة بيانات تحت اسم «نتائج الطلاب» من خلال إجراء الخطوات التالية على جهاز الكمبيوتر:

1. Open Microsoft Access.
   قم بفتح تطبيق Microsoft Access.
2. Create a database and name it "Students Results".
   أنشئ قاعدة بيانات تحت اسم «نتائج الطلاب».
3. Record the steps you have taken.
   دوّن الخطوات التي قمت بها.

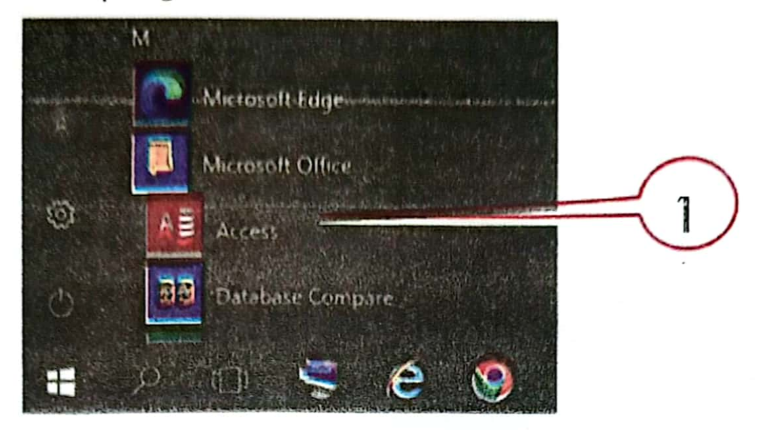




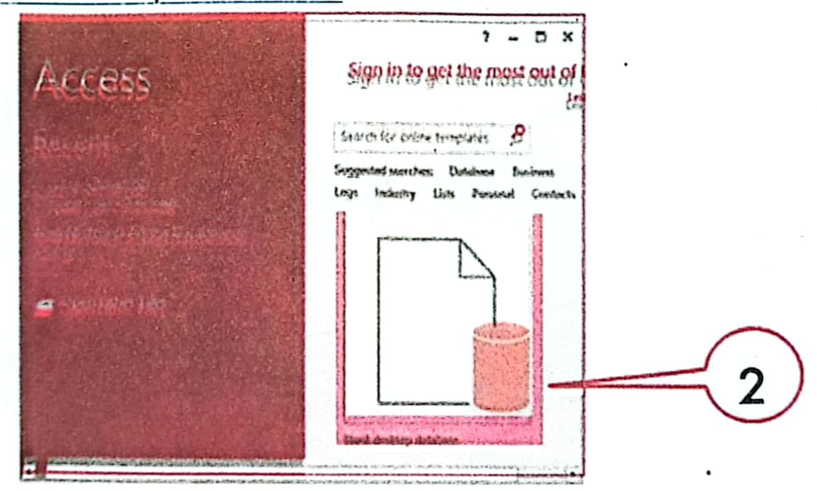


Steps to Create a New Database in Microsoft Access
خطوات إنشاء قاعدة بيانات جديدة باستخدام مايكروسوفت أكسس

1. Open the Access program.

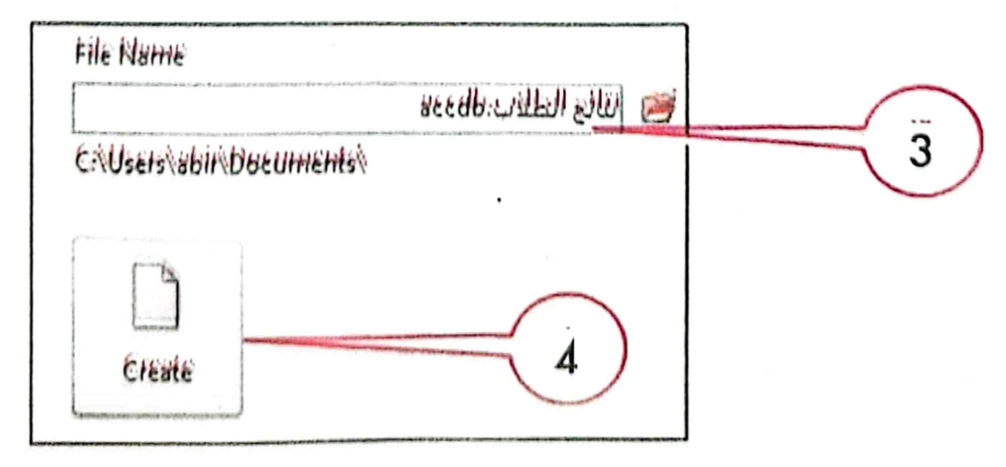


2. Select Blank desktop database to create a new blank database.



3. Type a name for the database, such as "Students Results".
4. Click "Create".

A database will be created under the name "Students Results".



Steps to Create a Table in Access

You can create a table in Access by doing the following:

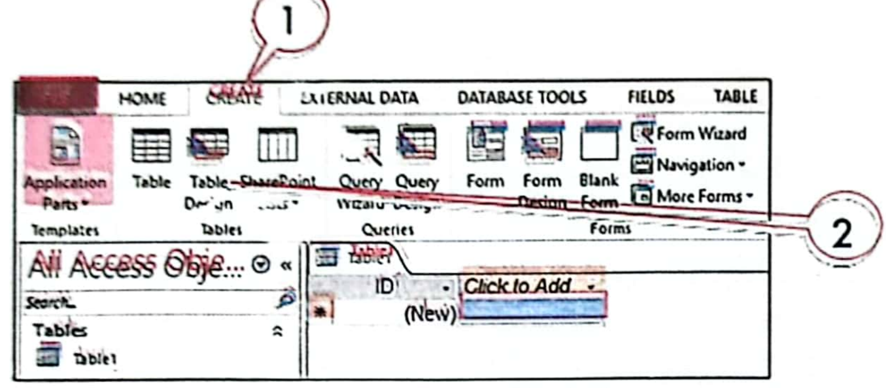
A. **Table Design:** To write the names of the table fields and specify their data type.

B. **Datasheet View:** To enter and display the table data.

First A Table Design

To choose the "Table Design" mode, follow these steps:

1 Choose "CREATE". 2 Select "Table Design".



أولًا: لاختيار نمط «تصميم الجدول» يتم اتباع الخطوات التالية:

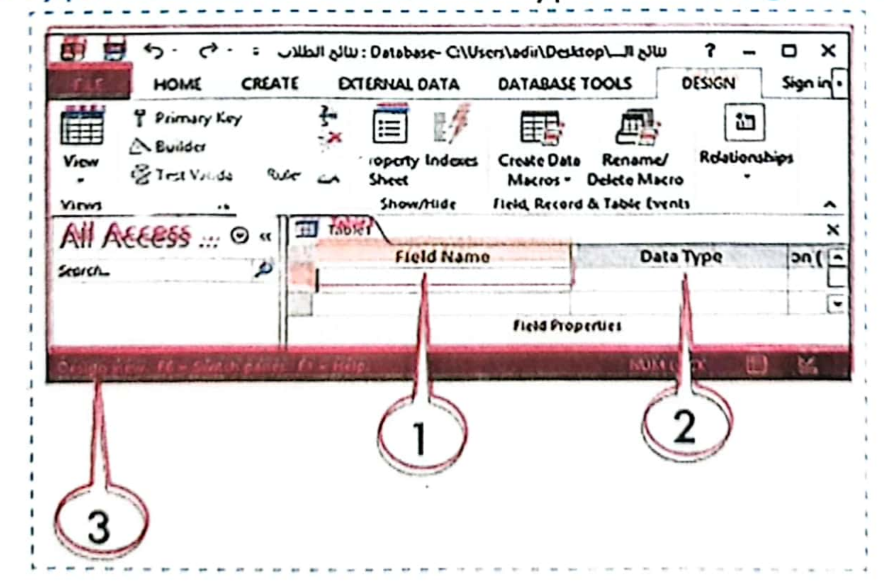
1 اختر إنشاء «CREATE». 2 اختر تصميم الجدول «Table Design».

Table Design Window Interface

When the "Table Design" window opens, it consists of:

1 **Field Name:** To write the name of the field.

2 **Data Type:** To choose the statement type. 3 **Design view mode**



واجهة نافذة تصميم الجدول: عند فتح نافذة تصميم الجدول «Table Design»، فإنها تتكوَّن من:

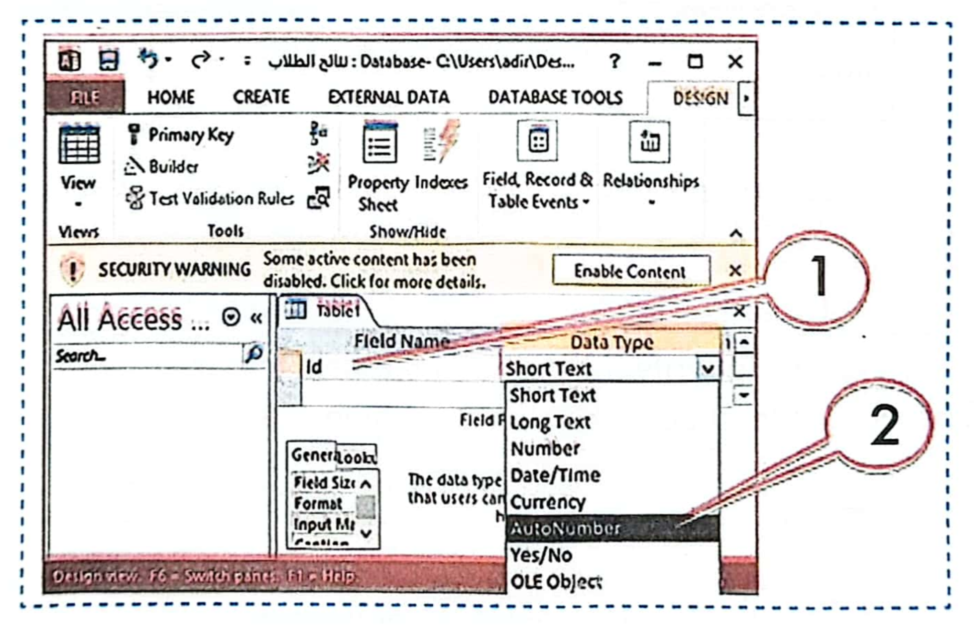
1 اسم الحقل: لكتابة اسم الحقل. 2 نوع البيانات: لاختيار نوع البيانات. 3 نمط عرض التصميم.



Example of steps to design a "Students Grades" table:

- In the Table Design window, create table fields by writing the field name and selecting the field data type.
- **Write the following field names and choose their data types:**
  - Student ID (ID)
  - Name
  - Arabic Grade
  - English Grade
  - Computer Grade

1. Write the field name "**ID**" for the student number.
2. Choose the field data type from the dropdown list as "**AutoNumber**".
3. Write the rest of the fields names and select the appropriate data type for each field.



خطوات تصميم جدول:

- في نافذة تصميم الجدول، يتم إنشاء حقول الجدول من خلال كتابة اسم الحقل، وتحديد نوع بيان الحقل.
- قم بكتابة أسماء الحقول التالية واختر نوع بياناتها:
  - حقل رقم الطالب وهو ID
  - الاسم
  - درجة العربي
  - درجة الإنجليزي
  - درجة الكمبيوتر

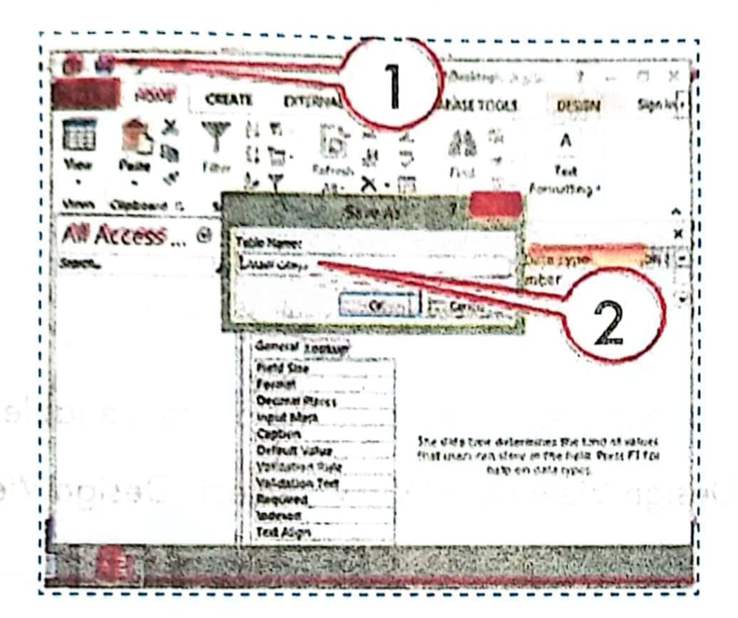
1. اكتب اسم الحقل «ID» رقم الطالب.
2. اختر نوع بيان الحقل من القائمة المنسدلة «AutoNumber».
3. اكتب باقي أسماء الحقول، وحدّد نوع البيان المناسب لكل حقل.



Save the table:

To save the table:

1. Click the save icon.
2. Enter the table name "Students Grades".



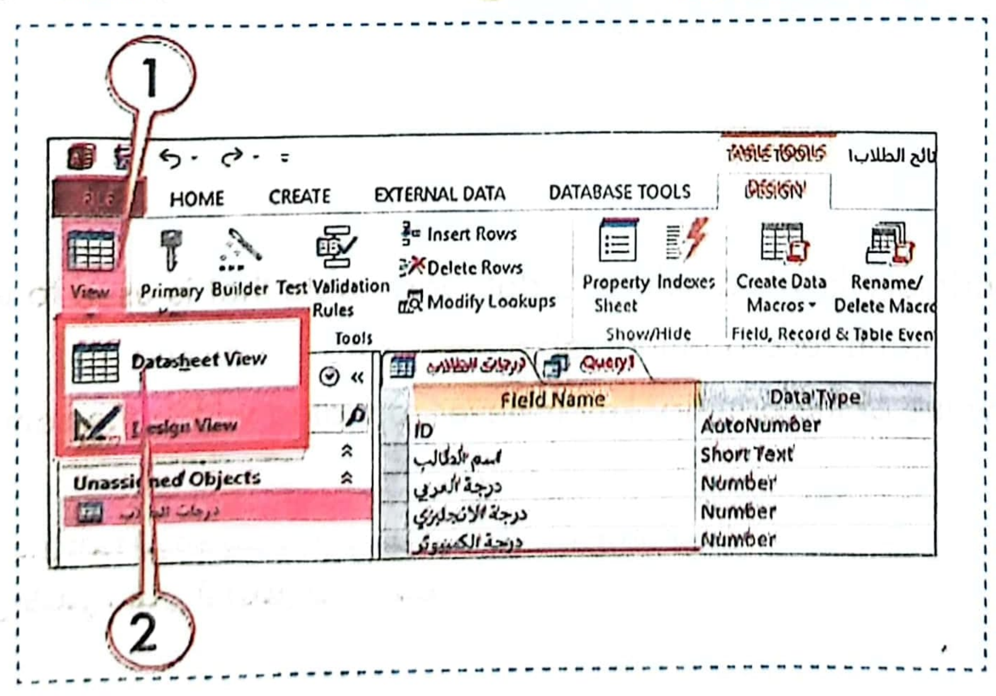
حفظ الجدول:

1 اضغط على أيقونة حفظ. 2 اكتب اسم الجدول «درجات الطلاب».

Second Datasheet View

To enter and view the table data:

1. Select "View".
2. Choose "Datasheet View".





3 The following Data view window will appear



Datasheet View نافذة عرض البيانات

4 Enter your data and your colleagues' data into the table.

5 To return to Design View from "View", select "Design View".

ثانيا: «عرض بيانات» الجدول «Datasheet View»: لإدخال وعرض بيانات الجدول:

1 اختر «View».

2 اختر «عرض البيانات» «Datasheet View».

3 سوف تظهر لك نافذة عرض البيانات التالية.

4 أدخل بياناتك وبيانات زملائك بالجدول.

5 للرجوع لنمط التصميم من «View»، يتم اختيار «Design View».

Primary Key

- The primary key is a field in a database table that is used to uniquely identify each record in that table.
- The value of the primary key is never repeated within the same table.

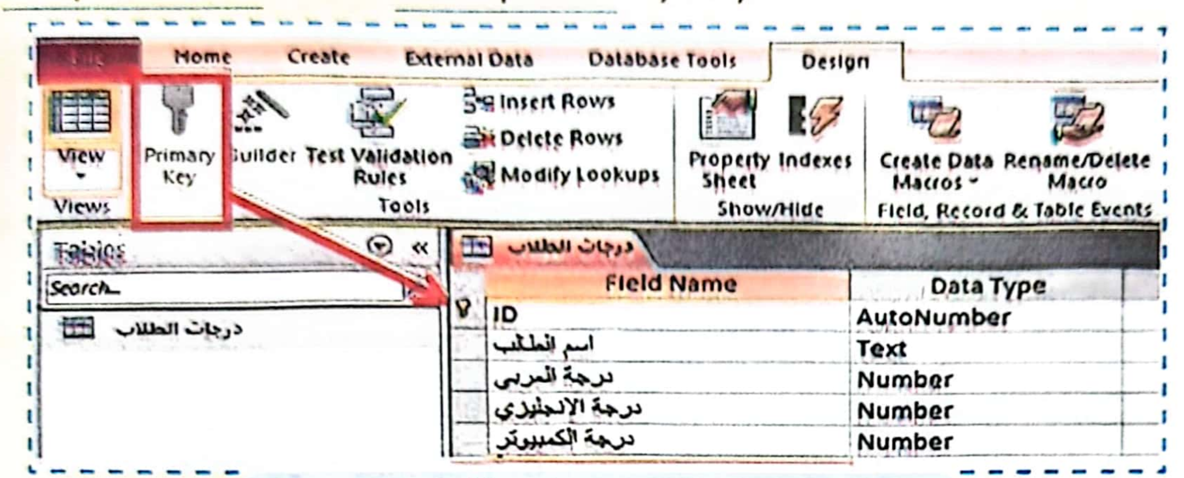
• المفتاح الأساسي:

هو حقل في جدول قاعدة البيانات يُستخدم ليُميز بشكل فريد كل سجل في ذلك الجدول.

وقيمة المفتاح الأساسي لا تتكرر أبدًا داخل الجدول نفسه.

Primary Key for the "Students Grades" Table

The "ID" field is chosen as the primary key because it is an automatic number given to the student and each student has a unique number that is not repeated by any other student.



The "ID" field is chosen as the primary key.

المفتاح الأساسي لجدول «درجات الطلاب»: تم اختيار حقل «ID» كمفتاح أساسي؛ لأنه رقم تلقائي يُعطى للطالب، كما أن لكل طالب رقمًا فريدًا لا يتكرر لدى أي طالب آخر.

أهم الكلمات والمصطلحات			
Database	قاعدة البيانات	Data accuracy	دقة البيانات
Spreadsheet program	برنامج الجدول	Data security	أمان البيانات
Simple mathematical operations	عمليات رياضية بسيطة	Data sharing	مشاركة البيانات
Word processor	معالج الكلمات	Big Data	البيانات الضخمة
CV	السيرة الذاتية	Data analysis	تحليل البيانات
Databases importance	أهمية قواعد البيانات	Data processing	معالجة البيانات
Saving information	حفظ المعلومات	Data storage	تخزين البيانات
Medical records	السجلات الطبية	Data table	جدول البيانات
Tracking inventory	تتبع المخزون	Spreadsheet	الجدول الحسابي
Organization	التنظيم	Microsoft Access	مايكروسوفت أكسس
Efficiency	الكفاءة	Primary Key	المفتاح الأساسي



Exercises on Lesson 8

1 Choose the correct answer:

1. A database is a collection of ....
   a. books b. data and information
   c. images d. applications

2. .... is one of the Office package programs that enables you to create a database.
   a. Word b. Paint c. Access d. PowerPoint

3. Databases are used in hospitals to store ....
   a. books b. patient's medical records
   c. movies d. clothes

4. You can use .... program in preparing your CV or writing reports.
   a. Excel b. Word c. PowerPoint d. Access

5. Which program is more suitable for handling large amounts of complex data?
   a. Microsoft Word b. Microsoft Excel
   c. Microsoft Access d. Notepad

6. Microsoft Access is part of the ....
   a. Adobe Suite b. video conferencing c. Google Docs
   d. Microsoft Office Suite

7. You can use databases in ...., such as analyzing big data and extracting knowledge.
   a. data analysis b. data breach
   c. data theft d. data encryption

8. Big Data refers to ....
   a. small data sets b. simple data
   c. very large and complex data sets
   d. images and videos



9. The advantages of using databases include ....
   a. organization b. efficiency c. security d. all of them

10. A spreadsheet consists of ....
   a. rows and columns
   b. books and pages
   c. text and images
   d. files and folders

11. The first step when creating a database in Microsoft Access is to ....
   a. open a spreadsheet
   b. create a new document
   c. open the Access program
   d. write a report

12. A .... in a spreadsheet represents a specific field of data.
   a. row b. column c. line d. menu

13. The "ID" field in the "Students Grades" table is chosen as the Primary Key because ....
   a. it is the first field
   b. it stores the student's grade
   c. it uniquely identifies each student
   d. it is a text field

14. To enter and view the table data, choose "View", then choose ....
   a. Datasheet View
   b. Design View
   c. Database Tools
   d. Degree View

15. The Table Design window in Access allows you to ....
   a. save files
   b. write the fields names
   c. print documents
   d. browse the web

16. To return to the design mode from "View", select ....
   a. Home
   b. Datasheet View
   c. Primary Key
   d. Design View

17. Big Data is very large and diverse sets of .... data that continue to grow significantly over time.
   a. structured
   b. unstructured
   c. semi-structured
   d. all of them

18. The Primary Key in a database table is used to ....
   a. sort data alphabetically
   b. identify each record uniquely
   c. store images
   d. generate reports





2 Put (✓) or (✗):

1. 🕮 Databases are collections of data and information that are not related to each other. ( )
2. Microsoft Access is a program used to create and manage complex databases. ( )
3. 🕮 Databases are information stored and managed manually using dedicated programs and applications. ( )
4. One advantage of using databases is the easy retrieval of data. ( )
5. 🕮 A database is an organized collection of data related to a specific subject. ( )
6. 🕮 Databases are used to save the students' data in school. ( )
7. 🕮 We use databases to track inventory in stores. ( )
8. MS Word is more suitable for managing large amounts of complex data. ( )
9. 🕮 It is difficult to use databases on websites. ( )
10. 🕮 A spreadsheet is a non-essential element in building databases. ( )
11. 🕮 A spreadsheet is the only source of data within a database. ( )
12. The amount of data is increasing rapidly due to digital technologies like AI and IoT. ( )
13. 🕮 In a spreadsheet, each row represents more than one record of data. ( )
14. 🕮 We use Microsoft Access when we have a large amount of complex data. ( )
15. 🕮 We use the "Design View" of the table to write the names of the table fields and determine the type of statement. ( )



16 📖 We use the "Data View" of the table to enter and display the table data. ( )

17 📖 We determine the type of data for the student name field "Text" to perform calculations on it. ( )

18 The Datasheet View in Access is used for entering and viewing table data. ( )

19 📖 We specify the type of data of the degrees fields "Number" to perform calculations on it. ( )

20 📖 In the database table, we must specify for each column the type of data it contains. ( )

21 📖 The Primary Key field is used to uniquely identify each record in the table. ( )

22 📖 The Primary Key value can be repeated within the same table. ( )

3 Complete the following sentences:

1 The amount of data is increasing and growing rapidly due to the rapid development of digital technologies, such as .... and ....

2 A spreadsheet consists of .... and ....

3 In spreadsheets, the .... represents a single record of data.

4 The .... in spreadsheets represents a specific field of data.

5 The value of the .... in a database is never repeated within the same table

Test Yourself on Lessons 7&8

1 Choose the correct answer:

1. Forms allow users to ....
   a. view data only
   b. enter, modify, or delete data
   c. install software
   d. create charts
2. A database is a collection of ....
   a. books
   b. data and information
   c. images
   d. applications
3. The Google Meet application can be downloaded for Android devices from ....
   a. Apple Store
   b. Google Play Store
   c. Microsoft Store
   d. Amazon
4. Which of the following is NOT a feature of Google Meet?
   a. Group video calls
   b. Screen sharing
   c. Document editing
   d. Real-time chat
5. The Table Design window in Access allows you to ....
   a. save files
   b. design the structure of your table
   c. print documents
   d. browse the web
6. The "ID" field in the "Students Grades" table is chosen as the Primary Key because ....
   a. it is the first field
   b. it stores the student's grade
   c. it uniquely identifies each student
   d. it is a text field
7. If you need to stop sharing your screen, you should click ....
   a. "End call"
   b. "Stop sharing"
   c. "Mute"
   d. "Invite participants"

2 Put (✓) or (✗):

1. One advantage of using databases is the easy retrieval of data. (   )
2. To create a meeting in Google Meet, you must first click on the "Join meeting" button. (   )
3. The term Big Data refers to small, simple data sets that do not grow over time. (   )
4. In Microsoft Access, the "Table Design" style allows you to define field names and data types. (   )
5. The "Students Results" database is created in Microsoft Access by first choosing a blank desktop database. (   )
6. Google Meet allows users to conduct group video calls, share screens, and collaborate in real time. (   )
7. The data stored in a spreadsheet is organized into rows and columns. (   )
8. A database is a collection of data and information organized and linked to each other. (   )

November Exam on Lessons (5-8)

1 Choose the correct answer:

1. Gmail is a service provided by ....
   a. Apple b. Google c. Microsoft d. Yahoo
2. Databases are used in hospitals to store ....
   a. books b. patient medical records
   c. movies d. clothes
3. Google Meet is primarily used for ....
   a. gaming b. video conferencing
   c. shopping d. music streaming
4. Data access in cloud computing is done through the ....
   a. internet b. local network
   c. hardware d. printer
5. Microsoft Access is part of the ....
   a. Adobe Suite b. Microsoft Office Suite
   c. Google Docs d. CorelDRAW
6. One advantage of email is its ....
   a. high cost b. slow speed
   c. ease of use d. limited usage
7. You can access Google Meet on a PC by visiting ....
   a. google.com b. gmail.com
   c. https://meet.google.com d. youtube.com

2 Put (✓) or (✗):

1. Databases are only used in schools to save students' information. ( )
2. Cloud computing cannot be used for data backup. ( )
3. Google Meet is a video conferencing service developed by Google. ( )
4. Spreadsheets cannot be used to create simple tables for data storage. ( )
5. Cloud storage services allow users to store files and folders online. ( )
6. One drawback of using email is that it can be hacked by hackers. ( )
7. A Primary Key in a database table can have duplicate values. ( )
8. Google Meet does not allow users to share their screens during a meeting. ( )



Forms & Queries

First: Forms in databases

Form

- A form is a graphical interface specifically designed to interact with data stored in the database.
- It is a screen that displays specific information from the database.
- It allows the user to enter, modify, or delete this information in an organized and convenient way.

• النموذج: هو عبارة عن واجهة رسومية مصممة خصيصًا للتفاعل مع البيانات المخزنة في قاعدة البيانات، فهو شاشة تعرض معلومات مُحددة من قاعدة البيانات، وتتيح للمستخدم إدخال أو تعديل أو حذف هذه المعلومات بطريقة منظمة ومريحة.

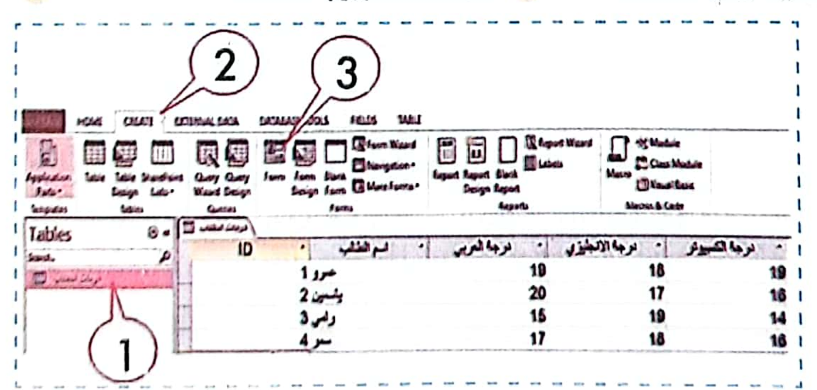
Creating a Form

- A new form named "Enter Students Grades" can be created using the Form Wizard.
- Creating a form from the current table "Students Grades"

1. Click on the table name "Students Grades" in the Navigation Pane on the left side of the screen.
   The data from the "Students Grades" table will appear on the right side of the screen.
2. Choose the Create tab.
3. Click Form.

- يمكن إنشاء نموذج جديد تحت اسم «إدخال درجات الطلاب» باستخدام معالج النماذج.
- إنشاء نموذج من الجدول الحالي «درجات الطلاب»:

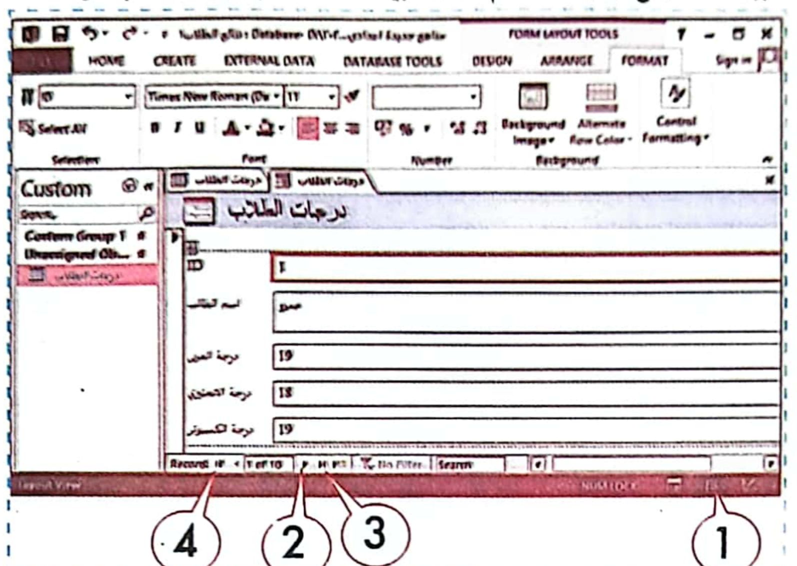
1. انقر فوق اسم الجدول «درجات الطلاب» في جزء التنقل Navigation Pane يسار الشاشة، فتظهر بيانات جدول «درجات الطلاب»، يمين الشاشة.
2. اختر علامة التبويب Create.
3. انقر فوق Form.





» The Access program creates the form that displays each student's record individually, as shown in the following figure:

فيقوم برنامج Access بإنشاء النموذج، ومن خلاله يتم عرض البيانات الخاصة بسجل كل طالب على حدة، كما في الشكل التالي:



1 The current window is called Layout View, where the data of the first record is displayed.

2 Click the Next Record icon to display the data of the next record.

3 Click the Last Record icon to display the data of the last record.

4 Click the First Record icon to display the data of the first record.

1 النافذة الحالية تُسمى عرض التخطيط Layout View؛ حيث يتم عرض بيانات السجل الأول.

2 اضغط على أيقونة «السجل التالي»«Next Record» لعرض بيانات السجل التالي.

3 اضغط على أيقونة «آخر سجل» «Last Record» لعرض بيانات آخر السجل.

4 اضغط على أيقونة «أول سجل» «First Record» لعرض بيانات أول السجل.

NOTES:

- The form is used to enter and modify data in the "Students Grades" table.
- All data entered through the form appears in the "Students Grades" table.
- Data can be entered through either the datasheet or the form.
- There are several other ways to create a form in an Access desktop database.

يستخدم النموذج لإدخال وتعديل البيانات في جدول «درجات الطلاب».

جميع البيانات التي تم إدخالها من خلال النموذج تظهر في جدول «درجات الطلاب».

يمكن إدخال البيانات من خلال جدول البيانات أو من خلال النموذج.

هناك طرق أخرى متعددة لإنشاء نموذج في قاعدة بيانات Access لسطح المكتب.





Second: Queries

- **Queries** are tools used to obtain data from the database according to specific criteria or conditions.
- Through queries, information can be obtained from the database based on the data stored in it.
- **Examples of queries:**
  - Creating a query to display data from a student's record
  - Creating a query to display a list of students who scored more than 18 marks in English

الاستعلامات في قواعد البيانات:

• الاستعلامات هي أدوات تستخدم للحصول على البيانات من قاعدة البيانات وفقًا لمعايير أو شروط محددة، ومن خلال الاستعلام يمكن الحصول على معلومات من قاعدة البيانات اعتمادًا على البيانات المخزنة في قاعدة البيانات.

• **أمثلة للاستعلامات:**

- إنشاء استعلام لعرض بيانات سجل لأحد الطلاب.
- إنشاء استعلام لعرض قائمة بالطلاب الذين حصلوا على أكثر من 18 درجة في مادة الإنجليزي.

Create a New Query Using the "Query Design" Method

- Microsoft Access provides many methods to create queries, including using the **Query Design** view, which we will discuss.
- When using the **Query Design** method, you can have greater control over the details of the query design.

إنشاء استعلام جديد باستخدام طريقة تصميم استعلام:

• يوفر برنامج Access العديد من الطرق التي تتيح إنشاء الاستعلام، ومنها على سبيل المثال استخدام طريقة عرض التصميم «Query Design»، وهي الطريقة التي سوف نتناولها.

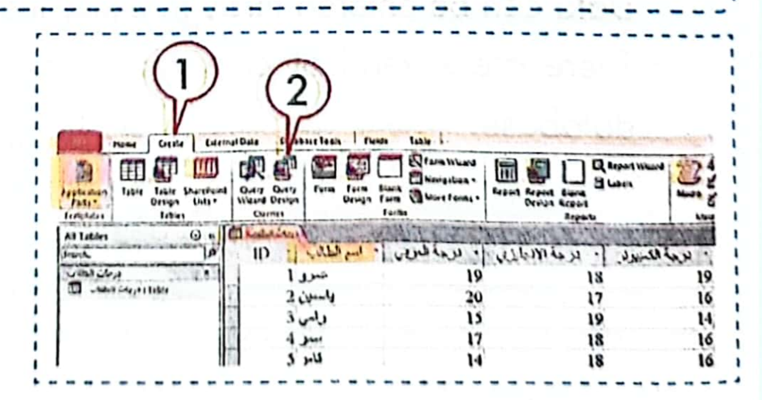
• عند استخدام طريقة تصميم استعلام، يُمكنك التحكم بشكل أكبر في تفاصيل تصميم الاستعلام.

Steps to Create a New Query Using the Query Design method

1. Choose the **Create** tab.
2. Click on "**Query Design**".

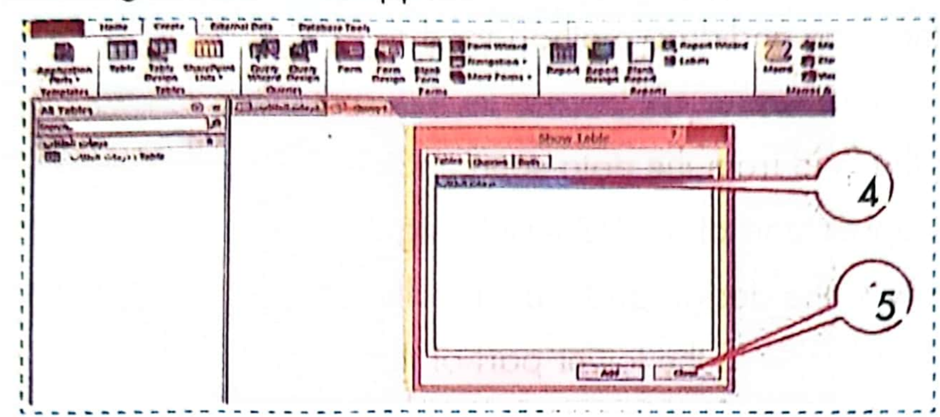
خطوات إنشاء استعلام جديد:

1. اختر التبويب إنشاء Create.
2. انقر فوق تصميم الاستعلام «Query Design».





3 The following window will appear.



4 Select the data source table you want to use, which is "**Students Grades**".

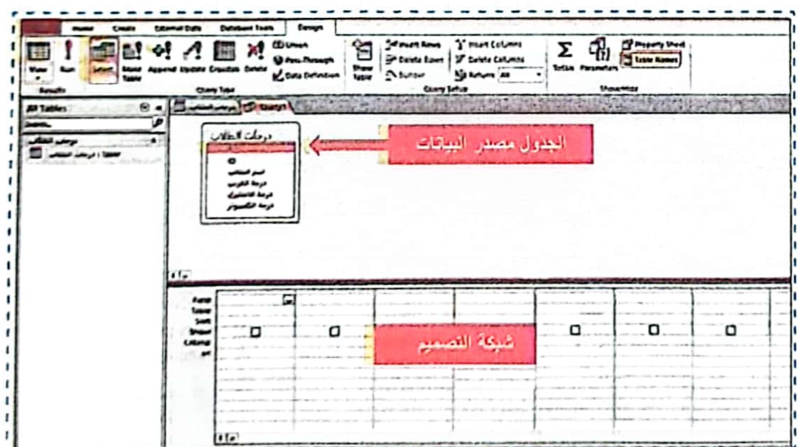
5 Click "**Add**", then "Close".

- The "**Design View**" window will appear, which is divided into two parts.
- The **upper part** contains the data source table.
- The **lower part** is the query design grid.

4 اختر جدول مصدر البيانات المطلوب استخدامه وهو «درجات الطلاب».

5 اضغط فوق إضافة Add، ثم إغلاق Close.

لتظهر نافذة تصميم الاستعلام «Design View»، وهي تنقسم لجزأين الجزء العلوي منها به الجدول مصدر البيانات، والجزء السفلي هو شبكة تصميم الاستعلام.



نافذة تصميم الاستعلام
Design View

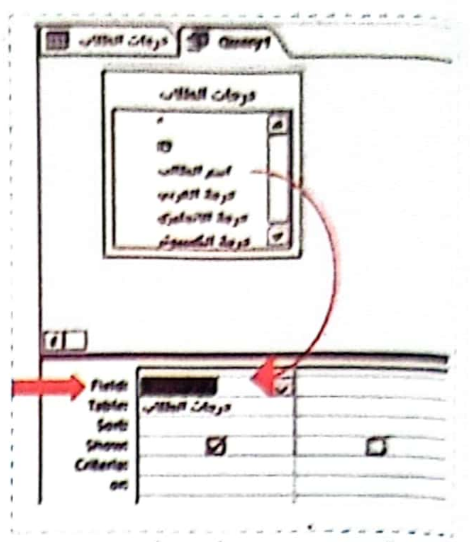
- Now, to create a query that displays the names of all students and their Arabic grades only, follow these steps:
- In this query, we will deal with fields from the "Students Grades" table.
- To do this, list the field names on the query design grid.

- والآن مطلوب إنشاء استعلام: يظهر فيه أسماء جميع الطلاب ودرجة العربي فقط لكل طالب.
- في هذا الاستعلام، سوف نتعامل مع حقول جدول «درجات الطلاب».
- ولعمل ذلك يتم إدراج أسماء الحقول على شبكة تصميم الاستعلام.





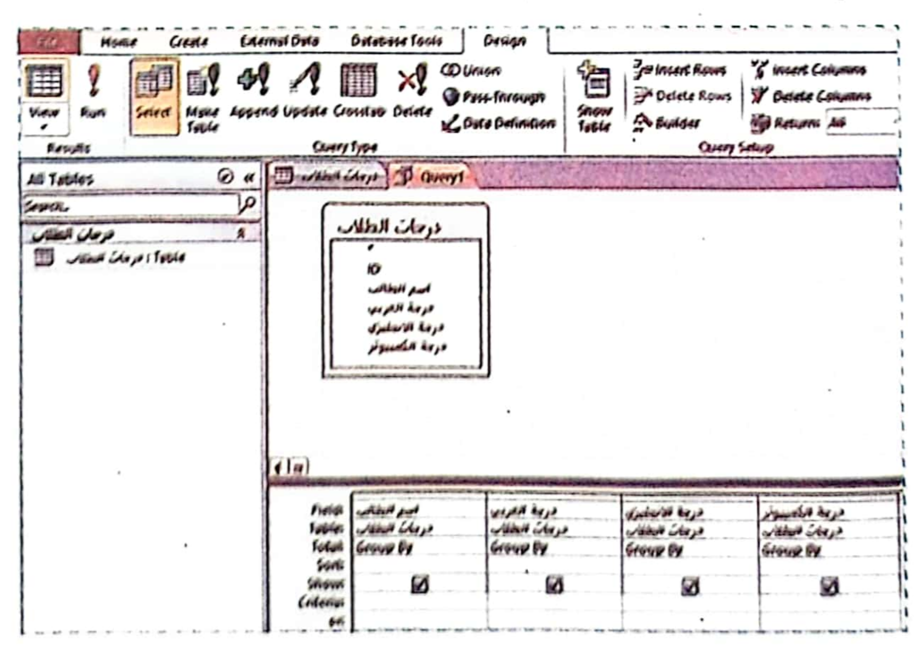
Adding a Field to the Design Grid



1. Use the drag-and-drop method for the field name.
2. Drag the field from the data source table in the upper part of the "Query Design" window to the design grid, specifically to the "Field" row in the lower part of the "Query Design" window.
3. When you add a field by dragging and dropping in the design grid, Access automatically fills the Table row with the name of the table used ("Students Grades"), indicating the data source for that field.
4. Insert the rest of the table fields into the design grid as shown in the following screen.

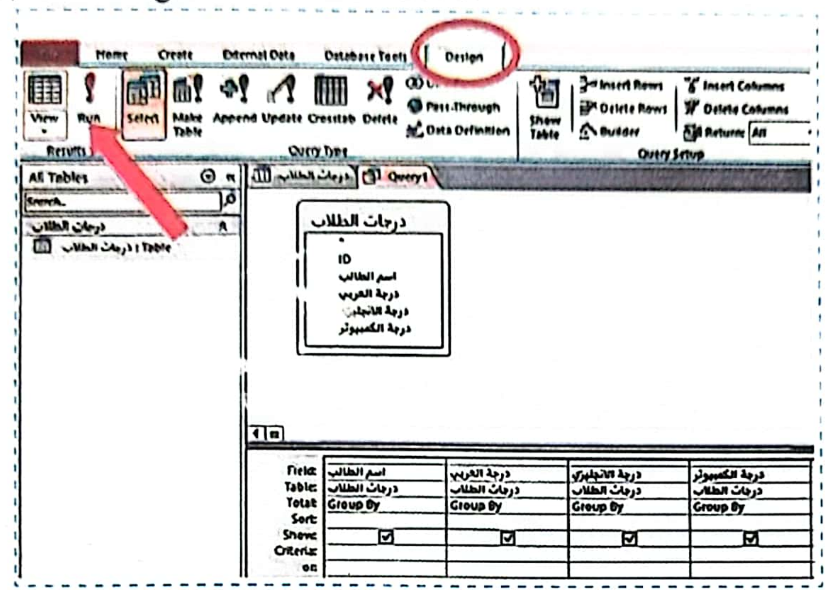
إضافة حقل لشبكة التصميم:

1. استخدم طريقة السحب والإلقاء لاسم الحقل.
2. اسحب الحقل من جدول مصدر البيانات في الجزء العلوي في النافذة «تصميم الاستعلام» لشبكة التصميم وبالتحديد إلى صف الحقل «Field» في الجزء السفلي من نافذة «تصميم الاستعلام».
3. عندما تضيف حقلًا بطريقة السحب والإلقاء في شبكة تصميم، يقوم Access تلقائيًا بملء الصف جدول Table في شبكة التصميم باسم الجدول المستخدم «درجات الطلاب»؛ ليوضح مصدر بيانات هذا الحقل.
4. قم بإدراج باقي حقول الجدول لشبكة التصميم كما بالشاشة التالية.



Execute the Query

1. From the Design tab:
2. Click the Run icon in the Results group.
3. The query result appears in the form of a table, showing all students' data.



تنفيذ الاستعلام: 1 بالتبويب Design. 2 اضغط على أيقونة Run في المجموعة Results.

3 تظهر نتيجة الاستعلام على شكل جدول يحتوي على كافة بيانات الطالب.

اسم الطالب	درجة العربي	درجة الانجليزي	درجة الكمبيوتر
	17	16	13
تامر	14	18	16
رامي	15	19	14
سلمى	14	13	17
سمر	17	18	16
عادل	11	17	15
عمر	18	16	14
عمرو	19	18	19
محمد	19	15	17
ياسمين	20	17	16

The result of executing the query

To hide a field or fields from the query result:

1. From the View menu, choose Design View.
   The query design window will appear.
2. Click on the ✓ sign in the check box in the Show row of the design grid under the Computer score and English score columns to uncheck them.

الكمبيوتر ودرجة الإنجليزي. • فيتم إزالة العلامة؛ مما يعني إخفاء الحقل/الحقول في نتيجة الاستعلام.



» The sign will be removed, which means hiding the field/fields in the query result.

Field:	اسم الطالب	درجة العربي	درجة الانجليزي	درجة الكمبيوتر
Table:	درجات الطلاب	درجات الطلاب	درجات الطلاب	درجات الطلاب
Total:	Group By	Group By	Group By	Group By
Sort:				
Show:	☑	☑	☐	☐
Criteria:				
or:				

إخفاء حقل أو حقول من نتيجة الاستعلام:

- من قائمة «View»، اختر «Design View».
- فتظهر نافذة تصميم الاستعلام.
- اضغط على علامة ✓ في مربع الاختيار الموجود بالصف عرض Show في شبكة التصميم أسفل عمودي درجة الكمبيوتر ودرجة الإنجليزي.
- فيتم إزالة العلامة؛ مما يعني إخفاء الحقل/الحقول في نتيجة الاستعلام.

» When you remove the ✓ sign from the English score and Computer score columns in the Show Row in the design grid, this means that these two fields will not appear when executing the query.

3 Run the Query:

Click the Run icon in the Results group. The result will display as follows:

اسم الطالب	درجة العربي	درجة الانجليزي	درجة الكمبيوتر
أنس	17	16	13
تامر	14	18	16
رامي	15	19	14
سلمى	14	13	17
سمر	17	18	16
عمار	11	17	15
عمر	18	16	14
عمرو	19	18	19
محمد	19	15	17
ياسمين	20	17	16

- فعند إزالة علامة ✓ من عمودي درجة الإنجليزي ودرجة الكمبيوتر بالصف عرض Show في شبكة التصميم؛ يعني ذلك عدم ظهور هذين الحقلين عند تنفيذ الاستعلام.
- اضغط على أيقونة Run في المجموعة Results فتظهر النتيجة كالتالي:



Establishing Criteria or Conditions within the Query

- The **Criteria** in a query helps you to identify specific items in an Access database.
- If a record matches all the criteria you entered in the query grid, it will appear in the query results.

وضع المعايير «Criteria» أو الشروط في الاستعلام:

- تساعدك المعايير «Criteria» في الاستعلام على تحديد عناصر محددة في قاعدة بيانات Access.
- فإذا تطابق سجل مع جميع المعايير التي أدخلتها في شبكة الاستعلام، فسيظهر السجل في نتائج الاستعلام.

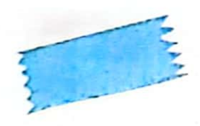
How to Add Criteria or Conditions in a Query

To add criteria to a query, follow these steps:

1. Open the Query in Design View.
2. Write the criterion or criteria in the Criteria row.

- **لإضافة معايير «Criteria» إلى الاستعلام، فيجب:**

1. فتح الاستعلام في عرض التصميم Design View.
2. اكتب المعيار أو المعايير في صف المعايير Criteria .



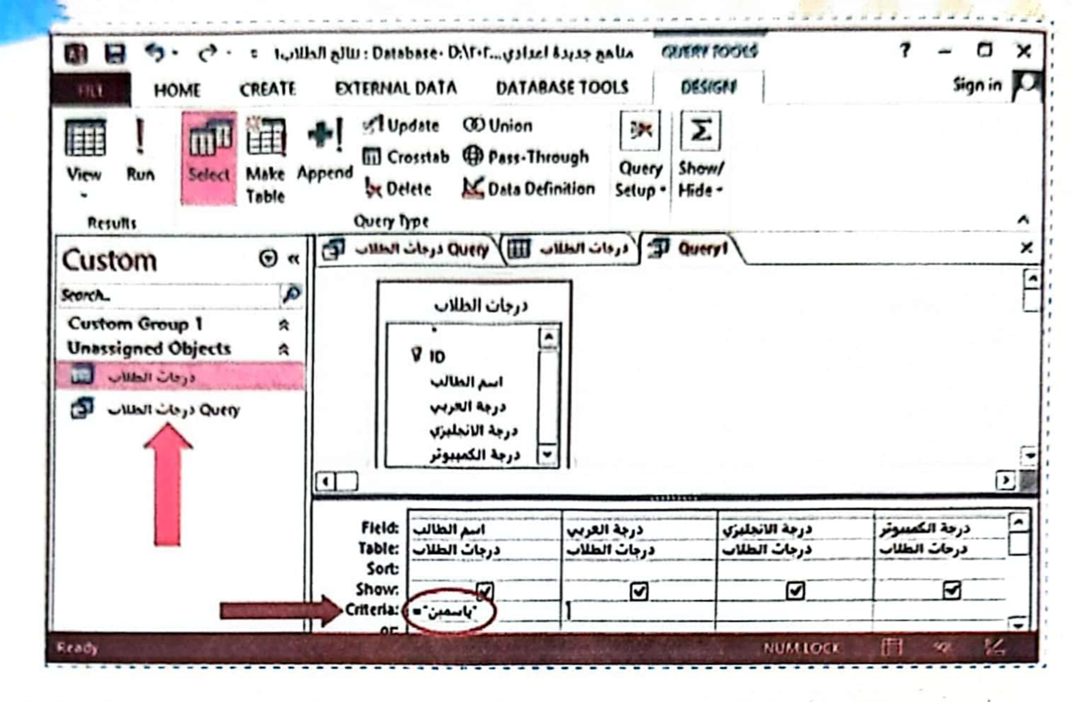
For example,

- To create a query that shows the record of the student "Yassmin" only, follow these steps:

1. Type the search criterion "Yassmin=" in the "Student Name" column in the Criteria field.
2. When you execute the query, the student record or records that meet the criterion or condition are displayed.









اسم الطالب	درجة العربي	درجة الانجليزي	درجة الكمبيوتر
ياسمين	20	17	16

The result of executing the query is as shown in the figure.

كمثال: مطلوب إنشاء استعلام لإظهار بيانات سجل الطالبة «ياسمين» فقط، الخطوات:

- اكتب معيار البحث "=ياسمين" في عمود «اسم الطالب» في الخانة Criteria.
- عندما تنفذ الاستعلام، يتم عرض السجل أو سجلات الطلاب والتي تحقق المعيار أو الشرط.

أهم الكلمات والمصطلحات

Database form	نموذج قاعدة البيانات	First Record	السجل الأول
Graphical interface	واجهة رسومية	Form creation	إنشاء النموذج
Data entry	إدخال البيانات	Data retrieval	استرجاع البيانات
Modify data	تعديل البيانات	Query design	تصميم الاستعلام
Delete data	حذف البيانات	Criteria	معايير
Navigation pane	جزء التنقل	Design grid	شبكة التصميم
Create tab	علامة التبويب إنشاء	Execute a query	تنفيذ الاستعلام
Layout View	عرض التخطيط	Hide fields	إخفاء الحقول
Next Record	السجل التالي	Query result	نتيجة الاستعلام
Last Record	السجل الأخير	Add criteria	إضافة معايير
Efficiency	الكفاءة		

Exercises on Lesson 9

1 Choose the correct answer:

1. .... is a graphical interface designed specifically to interact with data stored in the database.
   a. Folder b. Form c. Graph d. Presentation
2. Forms allow users to ....
   a. enter data b. modify data
   c. delete data d. all of them
3. The Layout view in MS Access Form displays ....
   a. all records at once b. each record individually
   c. the first record only d. the last record only
4. .... are tools used to obtain data from the database according to specific criteria or conditions.
   a. Forms b. Tables c. Reports d. Queries
5. The upper part of The "Design View" window contains the ....
   a. query design grid b. data source table
   c. query setup d. data result
6. The lower part in the "Design View" window is called ....
   a. query design grid b. data source table
   c. query setup d. data result
7. To execute the query in the Design tab, click on the .... icon.
   a. View b. Delete c. Select d. Run
8. To hide fields from the query result, from the "View" menu, choose ....
   a. Design View b. Layout View c. Datasheet View d. Setup
9. The .... in a query helps you identify specific items in an Access database.
   a. Form b. Criteria c. Setup d. Delete



10 After executing a query with criteria, the result will show ....

a. all records in the table

b. records that meet the criteria only

c. the entire database

d. a blank table

11 The Criteria row in a query is used to ....

a. sort data alphabetically

b. set specific conditions for the query

c. rename fields

d. create new tables

12 To create a new query in Access, click "Create",then ....

a. Query Design

b. Run icon

c. Home tab

d. Close the database

13 Queries in a database are used to ....

a. delete tables

b. format text

c. obtain data based on specific criteria

d. create new forms

14 In Query Design, the data source table appears in the ....

a. lower part of the screen

b. upper part of the screen

c. taskbar

d. Toolbar

15 To add a field to the query design grid, you ....

a. right-click and select "Add Field"

b. drag and drop the field name

c. click "New Field"

d. type the field name manually

16 To hide a field from the query result, you ....

a. check the box in the Show row

b. uncheck the box in the Show row

c. delete the field

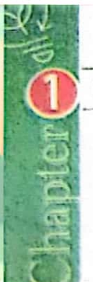
d. move the field to another table



2 Put (✓) or (✗):

1. The form is a graphical interface designed to interact with data stored in the database. ( )
2. We use the form to enter, modify, or delete this information in an organized and convenient way. ( )
3. A new form can be created under the name "Enter Students Grades" using the Form Wizard. ( )
4. All data entered through the form does not appear in the "Students Grades" table. ( )
5. Data can be entered through the spreadsheet or through the form. ( )
6. There are several other ways to create a form in an Access desktop database. ( )
7. Queries are tools used to obtain data from the database based on specific criteria. ( )
8. We use the Query Design View to display the query results. ( )
9. The Layout View in a form displays all records at once. ( )
10. The Query Design View window is divided into three parts. ( )
11. To execute a query in Access, you click on the Run icon in the Results group. ( )
12. The Query Design window is divided into two parts; the upper part is the query design grid. ( )
13. The Criteria row in a query is used to sort data alphabetically. ( )
14. The Query Design window is divided into two parts; the lower part is the data source table. ( )
15. You can only view data in a form, but cannot modify it. ( )
16. To add Criteria to a query, you must open the query in Layout view. ( )
17. You can hide fields from the query result by unchecking the box in the Show row. ( )





3 Match:

Column (A)	Column (B)
1 Queries	a. helps you identify specific items in an Access database in a query.
2 Criteria	b. is a graphical interface designed specifically to interact with data stored in the database.
3 When executing the query,	c. are tools used to obtain data from the database according to specific criteria or conditions.
4 Form	d. the student record or records that meet the criterion or condition are displayed.
5 The query design grid is	e. at the lower part of the "Design View" window.

1 .... 2 .... 3 .... 4 .... 5 ....

4 Complete the following sentences:

1. Data can be entered through the .... or through the ....
2. The "Design View" window is divided into two parts, the upper part contains the ...., and the lower part is the ....
3. To add a field to the design grid, use the .... method for the field name.
4. If a record matches all the criteria you entered in the query grid, the record will .... in the query results.
5. To add Criteria to a query, you must open the query in ....



Your Digital Project

Dear student,

In previous years, you have learned how to create a digital project using various methods, such as:

1. Presentations using PowerPoint
2. Designing posters

Now, we will delve deeper into the stages of executing your digital project.

درست في السنوات السابقة كيفية إنشاء مشروع رقمي من خلال طرق متنوعة مثل: عرض تقديمي بواسطة برنامج العروض التقديمية PowerPoint، وتصميم ملصق «بوستر».

والآن سوف نتعرف أكثر على مراحل تنفيذ مشروعك الرقمي.

Stages of Project Execution

- The stages of any successful project are interconnected; each contributing to achieving the desired goals. They can be summarized as follows:

- تنقسم مراحل أي مشروع ناجح إلى مراحل رئيسية مترابطة، كل منها يساهم في تحقيق الأهداف المرجوة. ويمكن تلخيصها كالتالي:

1 Project Initiation

- **Define a Clear and Achievable Idea:** Ensure the project idea is realistic and feasible.
- **Set Specific, Measurable, and Achievable Goals:** Establish clear objectives that can be measured and attained.

المرحلة الأولى: بدء المشروع:

- تحديد فكرة واضحة قابلة للتحقيق.
- تحديد أهداف محددة وقابلة للقياس وقابلة للتحقيق.





2 Project Planning

- **Develop Detailed Plans:** Create comprehensive plans that include a detailed work plan.
- **Set a Specific Timeline:** Establish a defined schedule for each phase of the project.
- **Identify Project Requirements:** Determine all necessary resources and requirements for the project.

المرحلة الثانية: تخطيط المشروع:

- وضع خطط ودراسة مُفصلة تشمل خطة العمل.
- وضع جدولًا زمنيًّا محددًا لكل مرحلة من مراحل المشروع.
- تحديد متطلبات المشروع.

3 Project Execution

- **Form a Team:** Assemble a team to work on the project.
- **Assign Roles and Responsibilities:** Clearly define the roles and responsibilities of each team member.
- **Commence Work:** Begin the actual execution of the project according to the established plans.

المرحلة الثالثة: تنفيذ المشروع:

- تشكيل فريق عمل.
- تعيين الأدوار والمسئوليات لكل فرد.
- بدء العمل: تنطلق عمليات التنفيذ الفعلية للمشروع وفقًا للخطط الموضوعة.

4 Project Evaluation and Adjustment

- **Continuous Monitoring and Evaluation:** Regularly track the project's progress, compare performance against the plan, and make necessary adjustments.
- **Problem Management:** Identify potential issues that may arise and take proactive steps to mitigate or avoid them.
- **Final Delivery and Evaluation:** Deliver the final project outputs and evaluate the overall success.





- **Document Lessons Learned:** Record all lessons learned from the project execution to benefit future projects.
- Acknowledge and thank everyone who contributed to the project's success.

المرحلة الرابعة: تقييم وتقويم المشروع:

- المتابعة والتقييم: يتم المتابعة المستمرة للتقدم في المشروع، وتقييم الأداء مقارنة بالمخطط، وإجراء التعديلات اللازمة على مسار العمل.
- إدارة المشكلات: يتم التعرف على المشكلات المحتملة التي قد تواجه المشروع واتخاذ خطوات استباقية؛ للتخفيف من حدتها أو تجنبها.
- التسليم والتقييم: يتم تسليم مخرجات المشروع النهائية.
- توثيق الدروس المستفادة: يتم توثيق جميع الدروس المستفادة من تجربة تنفيذ المشروع؛ للاستفادة منها في مشاريع مستقبلية.
- تقديم الشكر والتقدير لجميع مَنْ ساهم في إنجاز المشروع.

Digital Applications and Tools Needed for Project Execution

Google Applications Required During Project Execution:

- **Google Docs:** A cloud-based application for creating text documents.
- **Google Sheets:** A cloud-based application for creating spreadsheets.
- **Google Slides:** A cloud-based application for creating presentations.

To use these applications and other Google cloud services, you need to sign in with your Google account, which you have previously created.

بعض التطبيقات والأدوات الرقمية التي تحتاجها لتنفيذ المشروع

تطبيقات من Google App تحتاجها أثناء تنفيذ المشروع:

- Google Docs: تطبيق سحابي لإنشاء ملف نصي.
- Google Sheets: تطبيق سحابي لإنشاء جداول بيانات.
- Google Slides: تطبيق سحابي لإنشاء عروض تقديمية.

ولاستخدام تلك التطبيقات وخدمات الحوسبة السحابية Google المختلفة، يجب التسجيل بحسابك والذي سبق وأنشأته.

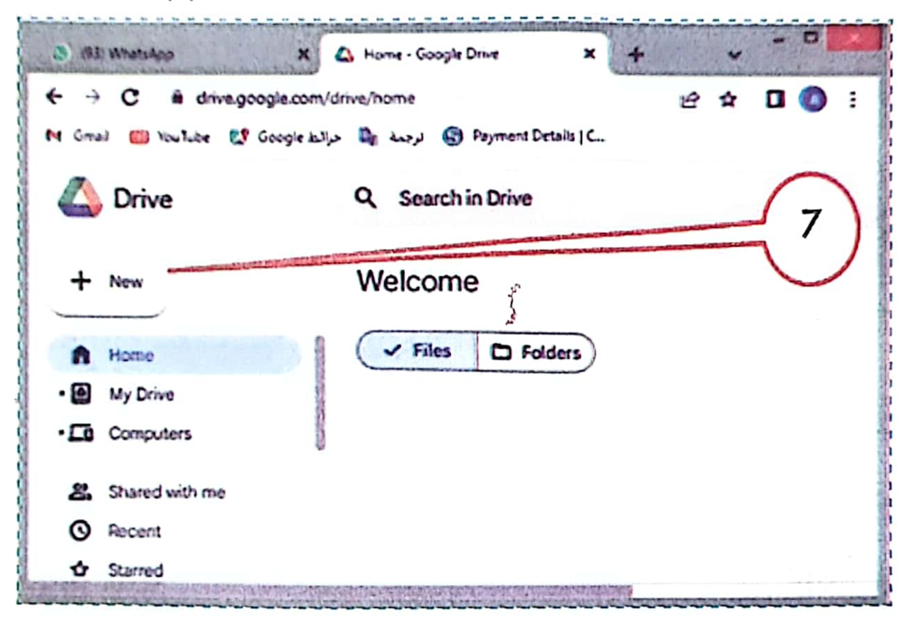




Signing in to Your Google Account

Follow these steps to sign in:

1. Open the browser: Type Google.com in the browser.
2. Select the Google apps icon.
3. Choose the Drive icon.
4. Type your username.
5. Click Next.
6. Type your password and then press Next.
7. You have now signed in to your Google account. The following screen will appear.



8. Click on New:

   Now, you can open various cloud applications that appear in the list, including **Google Slides**, **Google Sheets**, and **Google Docs**, and use them for your project.

إنشاء بريد إلكتروني على جوجل Google:

1 اكتب في المتصفح Google.com.
2 نضغط على أيقونة Google apps.
3 نختار أيقونة Drive.
4 اكتب اسم المستخدم Username.
5 اضغط Next.
6 اكتب كلمة المرور Password ثم اضغط Next.
7 والآن فقد تم التسجيل بـ «حساب جوجل» «Google account» لتظهر الشاشة التي أمامك.
8 اضغط على New.

والآن يمكنك فتح التطبيقات السحابية المختلفة؛ حيث تظهر أمامك في القائمة والتي منها تطبيقات Google Slides، Google Sheets، Google Docs، والاستعانة بها في مشروعك.



Summary
on Chapter 1

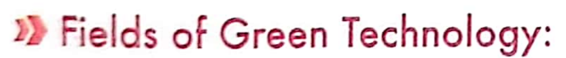
Lesson 1 Green Technology

Definitions:

- **Green Technology:** Also known as sustainable technology or clean technology
  - It is based on technological tools that protect the environment and optimize the use of its resources.

Key Points:

- **Electric Vehicles in Egypt:**
  - Aim: Reduce harmful emissions and fuel consumption.
  - Operation: Use batteries and charging stations.



- **Fields of Green Technology:**

1. Renewable Energy:
   - **Solar Energy:** generate electricity from sunlight via solar panels.
   - **Wind Power:** generate electricity from wind via turbines.
   - **Hydropower:** generate electricity from water movement via dams.
   - **Geothermal Energy:** generate electricity from Earth's internal heat.
   - **Bioenergy:** generate energy from organic materials like soybeans and corn.
2. Energy Consumption Rationalization:
   - **Green Building:** uses eco-friendly, energy-efficient materials, improved ventilation, and insulation.
   - **Energy-efficient Appliances:** high-efficiency computers and devices.
   - **Smart Transportation:** using electric vehicles to enhance energy efficiency.



3 Waste Recycling:

- **Material Recycling:** paper, plastic, and metals into new products.
- **Transforming Organic Waste:** into compost to enhance soil fertility.
- **Waste Reduction:** by reusing and repairing products.

4 Water Treatment:

- **Purification:** making contaminated to be reused or drunk.
- **Efficient Irrigation:** smart systems like drip irrigation.
- **Water-saving Devices:** repairing water leaks.

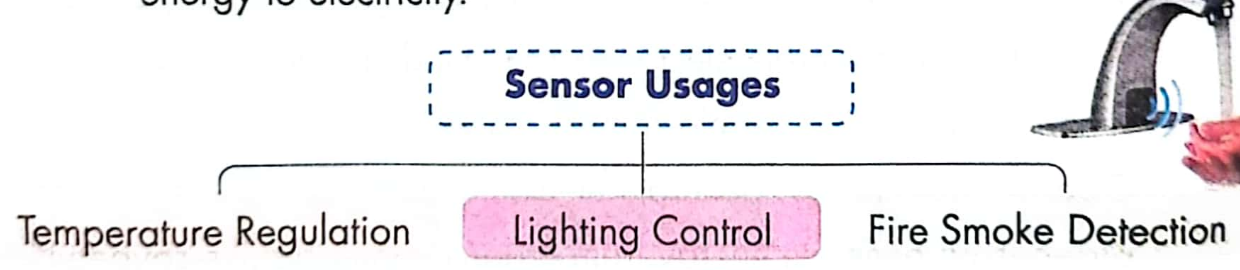
Benefits of Green Technology:

1 Environmental Preservation:

- Reduces carbon dioxide emissions and global warming.
- Promotes alternatives like electric cars to lower pollution.

2 Resource Conservation:

- **Water and Electricity Optimization:**
  - **Body Sensors:** control water flow and optimize electricity usage.
  - **Solar Energy:** photovoltaic panels convert solar energy to electricity.



Lesson 2 Digital Transformation and Its Importance in Our Daily Lives



- **Digital Transformation:** the combination of digital technology into all business aspects to enhance workflow efficiency, lower costs, and innovate products and services.

Key Points:

Importance of Digital Transformation:

1. Enhancing efficiency and productivity
2. Quality enhancement
3. Enhancing sales and revenue
4. Enhancing innovation and creativity
5. Sustaining competitiveness
6. Enhancing decision-making
7. Minimizing energy and resource consumption.
8. Creating new employment opportunities.

Digital transformation: is a national project that links all government agencies through an information environment, and citizens can obtain all their services through the internet.

Tools Used in Digital Transformation:

- **Workflow Management Tools:** enhance efficiency of repetitive tasks (e.g., "Digital Egypt" platform).



- **Electronic Payment Methods:** convenient, fast, and secure payment options (e.g., electronic payment cards, INSTAPAY application).





- **Collaboration and Communication Tools:** enables face-to-face communication with others (e.g., video conferencing apps like Zoom & Google Meet).

Google Meet

- E-learning resources
- AI and machine learning
- Cloud computing
- Cybersecurity solutions
    - Note: an email address is required to access any digital services or products.

» Green technology and digital transformation are closely related and contribute to achieving common goals, such as:

1. Enhancing resource utilization efficiency
2. Reducing harmful emissions
3. Supporting sustainability

Examples of integration between green technology and digital transformation applications:

- Smart Energy Grids
- Precision Farming
- Smart Buildings
- Smart Transportation
- Smart Cities

Benefits of Integration between green technology and digital transformation applications:

- Speeding up the process of the digital transformation.
- Enhancing the efficiency of green technology.
- Creating new employment opportunities.
- Improving the quality of life.

Lesson 3 Operating Systems

Definitions:

» **Operating System (OS):** an interface between the user, hardware, and software. It manages hardware components, runs software, and helps users accomplish tasks smoothly.

Key Points:

1. **Personal Computers (PCs):**
   - Operating Systems: Microsoft Windows, macOS, Linux distributions.


Windows





2. **Mobile Devices:**
   - **Operating Systems:** Apple's iOS, Google's Android, alternative mobile OS.
3. **Servers:**
   - **Operating Systems:** Linux distributions, Microsoft Windows Server, specialized server OS.
4. **Gaming Consoles:**
   - **Operating Systems:** Exclusive OS for PlayStation, Xbox, Nintendo Switch.
5. **Smart TVs:**
   - **Operating Systems:** Android TV, Tizen, webOS, others.
6. **Wearable Devices:**
   - **Operating Systems:** Tailored OS for smartwatches, fitness trackers.



7. **Network Devices:**
   - **Operating Systems:** Used in routers, switches for network management and security.
8. **Automotive Systems:**
   - **Operating Systems:** Used in modern cars and vehicles to control various functions such as infotainment, navigation



9. **Embedded Systems:**
   - **Operating Systems:** Used in Automated Teller Machine (ATM) and Point of Sale Terminal



10. **Industrial Control Systems (ICS):**
    - **Functions:** Control and monitor industrial processes, increase productivity, improve product quality, and ensure health and operational safety.
    - **Applications:** Used in sectors like energy, transportation, food production, petrochemicals, electronics, and medical industries.



OS Startup Screen (Desktop):

- **Icons:** Symbols representing software and system settings, arranged over a background image or color.
- **Bars:** Contain icons for installed software and system settings (e.g., date, time, sound, network).
- **Note:** The startup screen varies for different operating systems and versions.



Installation and Removal of Software and Digital Peripherals

1 From a CD or DVD:

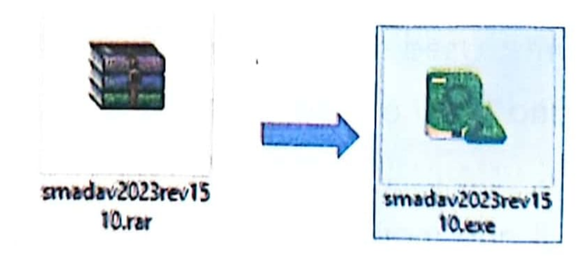
- Insert the disc into the drive.
- AutoPlay dialog box appears.
- Click Run SETUP.EXE.
- Follow instructions

2 From an Internet-Downloaded File:

- Access the downloaded file via "This PC" icon.
- Double-click the file to start the installer.
- If compressed, unzip before accessing SETUP.EXE.

3 From a Compressed File:

- Extract the compressed files.
- Double-click the installation file.
- Follow the software's installation instructions.



Removing or Uninstalling Software:

- **Uninstalling program:** Delete all program files from your device.
- Removing unused programs saves disk space and improves device performance.

1. Program has its own Uninstallation Command.
2. Using Control Panel:
   (A) Access Control Panel. (B) Click "Uninstall a program".
   (C) Select the program and click Uninstall.

» Setting Up and Configuring Hardware:

- Plug and Play Device Installation
  1. OS Includes the Driver: OS Installs the driver automatically
  2. OS Does Not Include a Driver: OS runs a wizard program to find the driver

» Installing a Printer:

1. Local Printer (Plug and Play): installed automatically.
2. Non-Plug and Play Printer:

   Control Panel ⟹ Hardware and Sound ⟹ Devices and Printers. ⟹ Click "Add a printer".

   ⟹ Select "Add a local printer or network printer

   ⟹ Choose the correct port (LPT1 for older, USB for modern printers).

   - If you don't find the driver you need: Click Have Disk
   - click Windows Update to update the list of printers.
   - give a name to the printer.
   - Print a test page to ensure proper installation.

Lesson 5 Electronic Mail (Email)

Definitions:

» Email: a digital communication system used to send and receive messages over the Internet. It is an indirect communication tool, a cloud computing tool used to share texts, files, images, and other information.



Summary on Chapter 1

Key Points:

Components of an Email Address:

1. User name
2. @ Symbol
3. Domain name

Advantages of Using Email:

- Speed
- Ease
- Free cost in most cases.
- Diversity
- Reliability
- Digital services

Drawbacks of Using Email:

- Hacking
- Spam
- Fraud
- Viruses
- Privacy

Providers of Email Services:

- Gmail
- Yahoo email
- Hotmail/Outlook

Creating an Email on Google:

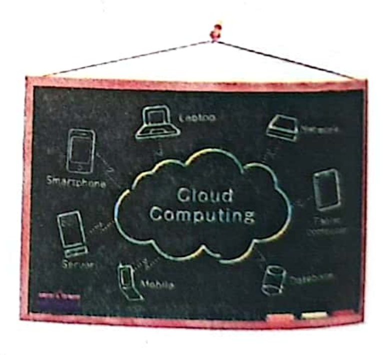
- You need Google Account to access Gmail and other Google services such as:Google Meet, Google Docs, Google Drive, YouTube.

Sign Out of Gmail:

- Click and choose 'Sign out'.

Lesson 6 Cloud Computing

Definitions:



Cloud Computing: a model for providing digital services over the Internet, such as:

- **Cloud Storage:** storing files and folders online.
- **Software Service:** making applications available online.
- **Resource Sharing:** sharing and exchanging files over the internet.

Key Points:

Benefits of Cloud Computing:

1. **Ease of Access:** services available without high-spec hardware.
2. **Service Availability:** access data, files, and applications from anywhere with the internet.



3. **Reducing material costs:** no need for software licenses, no need for high-spec hardware.

Areas of Using Cloud Computing in Daily Life:

1. Communication:
   - **Email:** Gmail, Outlook, Yahoo Mail
   - **Social Networking:** Facebook, Twitter, Instagram
   - **Messaging Services:** WhatsApp, Telegram
2. Computer Storage:
   - **File Storage:** Google Drive, OneDrive
   - **Data Backup:** Cloud backup services
3. Producing Projects:
   - **Word Processing:** Google Docs, Microsoft Word Online
   - **Spreadsheets:** Google Sheets, Microsoft Excel Online
4. Education:
   - **E-learning Platforms:** Ministry of Education platform
   - **Collaboration Tools:** Google Classroom, Microsoft Teams
5. Entertainment:
   - **Video Streaming:** YouTube
   - **Video Games:** Online cloud platforms
   - **Music Services:** Cloud music services
6. Other Areas:
   - **Online Shopping:** E-commerce sites
   - **Online Banking:**used for money transfer, bill payments
   - **Healthcare Services:** Storing medical records

Data Processing and Storage in Cloud Computing:

1. Data Collection
2. **Data Transfer:** To cloud data centers.
3. Data Processing
4. Data Storage
5. Data Management
6. Data Access



Requirements to Obtain Cloud Computing Services:

1. Computer or Mobile Phone
2. Internet Browser or Application
3. Internet Connection
4. Account with a Cloud Service Provider

Famous Cloud Computing Service Providers

- Amazon Web Services (aws)
- Microsoft Azure
- Google Cloud Platform



Lesson 7 Google Meet and Project Management

Definitions:

Google Meet: a video conferencing service developed by Google that enables users to conduct group video calls, share screens, chat, collaborate in real time, and work together on joint projects.

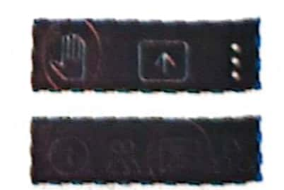
Key Points:

You can access Google Meet:

- From PC: via the link https://meet.google.com
- From mobile: Download the "Google Meet" app from the Google Play Store.

Creating a Meeting:

- Instant Meeting: Click "New meeting" > "Start an instant meeting".
- Scheduled Meeting: Click "Create a meeting for a later time".
- Joining a Meeting: Click the meeting link and wait for the organizer's approval
- During a Meeting:
- Turn off the microphone when not speaking.
- Raise your hand when you want to speak.
- Use the "In call messages" icon to send messages to participants.



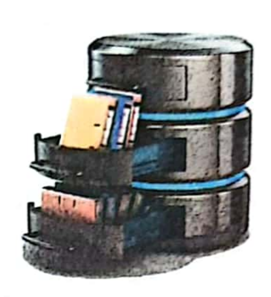


- Click the "Share Screen" icon to share your screen with participants.
- **To Stop Sharing:** Click "Stop Sharing" in the Google Meet window.



Lesson 8 Database Design

Definitions:



- **Databases:** a collection of data and information organized and linked to each other, similar to a library but for data. Used to store and retrieve information easily and efficiently.
- **Big Data:** very large and diverse sets of structured, unstructured, and semi-structured data that continue to grow significantly over time.
- **Spreadsheet Concept:** the basic element in building databases and is the only source of data within the database, it consists of rows (records) and columns (fields).
- **Microsoft Access** it is one of the applications used to create databases. It builds a real database, where you can build a complex structure for data and manage it more efficiently.
- **Primary Key:** a field in a database used to uniquely identify each record in a table.

Key Points:

- **Importance of Databases:**
  1. **Schools:** Saving students' information.
  2. **Hospitals:** Saving medical records.
  3. **Stores:** Tracking inventory.
- **Advantages of Using Databases:**
  1. Organization
  2. Efficiency
  3. Accuracy
  4. Security
  5. Sharing





Summary on Chapter 1

Uses of Databases:

1. Websites
2. Data Analysis
3. Scientific Research
4. Business Applications



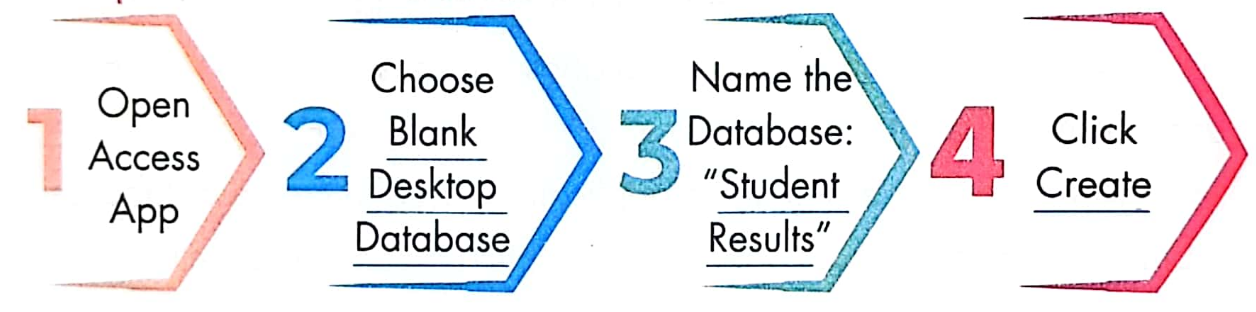
- Programs like Word and Excel can create spreadsheets, but for complex data, use dedicated database applications like Microsoft Access.



When do we use Microsoft Access?

- Large Amount of Complex Data.
- Creating Relations Between Data.
- Custom Applications for Data Management.
- Higher Data Security.

Steps to Create a Database in Access:



- **Note:** the primary key value is never repeated within the same table, for example: "id" field in the "Student Grades" table.

Lesson 9 Forms and Queries

Definitions:

- **Form:** a graphical interface designed to interact with data stored in a database. It displays specific information from the database and allows users to enter, modify, or delete information in an organized and convenient way.
- **Query:** a tool used to obtain data from a database based on specific criteria or conditions.

Key Points:

Creating a Form:

1. Select Table: click on "Student Grades" in the Navigation Pane.
2. Create Tab: choose "Create" > "Form".
3. Layout View: displays data for each student record individually.
4. Navigation: use icons to move between records.
5. Data Entry: forms can be used to enter and modify data in the table.

Creating a Query:

1. Query Design: choose "Create" > "Query Design".
2. Select Table: add "Student Grades" as the data source.
3. Design Grid: drag and drop fields to the design grid.
4. Execute Query: click "Run" to display the query result.
5. Modify Query: delete unnecessary fields to refine the query.
6. Save Query: name it, e.g., "Student Arabic Grades".

Hiding Fields in Query Results:

1. Design View: open the query in Design View.
2. Uncheck Show: uncheck the checkbox in the "Show" row for fields you want to hide.
3. Run Query: click "Run" to see the updated results without the hidden fields.

Adding Criteria to a Query:

1. Design View: open the query in Design View.
2. Enter Criteria: type the criteria in the Criteria row for the relevant field.
   - Example: To show only the record for student "Yasmin", type ="Yasmin" in the "Student Name" column.
3. Execute Query: click "Run" to display records that meet the criteria.



Final Exams





1 Choose the correct answer:

1. Digital transformation primarily aims to ....
   a. increase costs
   b. reduce efficiency
   c. enhance workflow
   d. limit innovation
2. The "Digital Egypt" platform is ....
   a. a social media app
   b. an e-government service
   c. a video game
   d. a fitness tracker
3. Green technology is also known as ....
   a. clean
   b. harmful
   c. sustainable
   d. both a and c
4. To access digital services, one needs a ....
   a. postal address
   b. telephone number
   c. bank account
   d. email address
5. Precision farming integrates .... with green technology.
   a. manual labor
   b. digital transformation
   c. fossil fuels
   d. paper documents

2 Put (✓) or (✗):

1. The "Digital Egypt" platform offers electronic services to citizens. (   )
2. Electronic payment methods are typically inconvenient and slow. (   )
3. An email address is not required to access digital services or products. (   )
4. Collaboration tools in digital transformation include Zoom and Google Meet. (   )
5. Smart energy grids are unrelated to the integration of green technology with digital transformation. (   )

3 Complete the following sentences using the words between the brackets:

{email address, Workflow management, Renewable energy, operating System, Sustainability}

1. To access digital services, one must have an ....
2. .... tools help in streamlining repetitive tasks.
3. .... sources include solar and wind power.
4. .... refers to maintaining ecological balance by reducing resource use.
5. The .... manages all software and hardware on a computer.



1 Choose the correct answer:

1. Email is considered ....
   a. a digital communication system
   b. a manual communication system
   c. a direct communication system
   d. a virus system
2. Which of the following is required to install a non-Plug and Play printer?
   a. MS Word
   b. Control Panel
   c. Taskbar
   d. Recycle Bin
3. When you download software from the internet, the software is usually in the form of a/an ....
   a. digital fingerprint
   b. file
   c. image
   d. worksheet

4 Cloud computing allows users to ....

a. store files locally
b. access digital services over the internet
c. play offline games
d. print documents

5 The @ symbol in an email address separates the ....

a. username and domain name
b. subject and message
c. inbox and outbox
d. file and folder

2 Put (✓) or (✗):

1 Cloud computing requires high-specification hardware to be accessed. (   )

2 Removing unused programs increases the storage space on the disk. (   )

3 The installation process of a program depends on the form in which the program comes. (   )

4 Emails sent through Gmail are completely secure and cannot be hacked. (   )

5 The LPT1 port is typically used for modern printers that connect via USB. (   )

3 Complete the following sentences using the words between the brackets:

(Control Panel – drivers – storage space – Uninstalling – SETUP.EXE)

1 Modern operating systems include a list of .... for many accessory devices.

2 Removing unused programs increases the .... on the disk.

3 .... a program deletes all files of the program from your computer.

4 Sometimes, to uninstall a program, use the ....

5 You can install a program by clicking on ....

Model Exam 3

1 Choose the correct answer:

1. Green technology is also known as ....
   a. clean
   b. sustainable
   c. harmful
   d. both a and b

2. Which of these is NOT a renewable energy source?
   a. Wind power
   b. Hydropower
   c. Solar power
   d. Coal

3. To install a new peripheral device, you need to provide ....
   a. drivers
   b. folder
   c. images
   d. information and data

4. The "Digital Egypt" platform is ....
   a. an e-government service
   b. a social media app
   c. a video game
   d. a fitness tracker

5. The @ symbol in an email address separates the ....
   a. username and domain name
   b. subject and message
   c. inbox and outbox
   d. file and folder

2 Put (✓) or (✗):

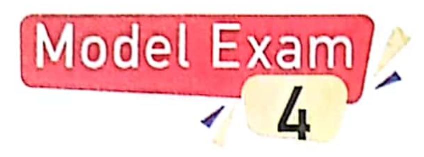
1. The installation process depends on the form in which the program comes. (   )
2. Digital transformation does not reduce costs in businesses. (   )
3. The LPT1 port is typically used for modern printers that connect via USB. (   )
4. Cloud computing reduces the need for high-spec devices. (   )
5. One advantage of using databases is the easy retrieval of data. (   )



3 Complete the following sentences using the words between the brackets:

(Green technology – Coal – Control Panel – internet – Primary Key)

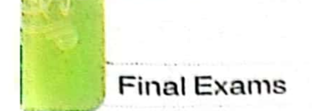
1. .... is also known as sustainable technology.
2. .... is not a renewable energy source.
3. To uninstall a program, you can use the ....
4. Data access in cloud computing is done through the ....
5. The .... in a database table is used to uniquely identify each record.



1 Choose the correct answer:

1. When installing a new peripheral device, the operating system often automatically installs the ....
   - a. printer
   - b. driver
   - c. file explorer
   - d. software update
2. Which of these is NOT a free email service provider?
   - a. Gmail
   - b. Google Meet
   - c. Yahoo Mail
   - d. Outlook
3. Plug and Play devices are recognized by the operating system ....
   - a. automatically
   - b. after manual setup
   - c. through Control Panel
   - d. by default





4 Cloud computing reduces costs by ....

a. requiring software licenses

b. eliminating the need for high-spec devices

c. requiring expensive hardware

d. increasing hardware costs

5 The first step to uninstall a program via Control Panel is to........................ .

a. cick "delete"

b. click "Uninstall a program"

c. insert a CD

d. download an app

2 Put (✓) or (✗):

1 Email is one of the direct communication tools. (   )

2 Removing unused programs slows down the computer (   )

3 Modern operating systems do not include a list of drivers for many accessory devices. (   )

4 Cloud storage services allow users to store files and folders online. (   )

5 An alternative email address is used for account recovery. (   )

3 Complete the following sentences using the words between the brackets:

(Google Docs – Control Panel – Cloud computing – LPT1 – Uninstalling)

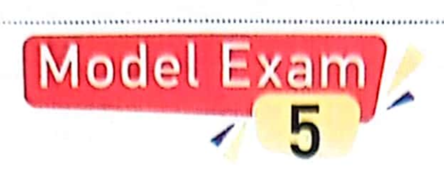
1 .... provides digital services over the Internet.

2 To uninstall a program, you can use the ....

3 The .... port is typically used for older printers connected via parallel port.

4 .... is a cloud-based word processing program.

5 .... a program deletes all files of the program from your computer.



1 Choose the correct answer:

1. Which of the following is a function of the "Digital Egypt" platform?
   a. Playing online games
   b. Enhancing government procedure efficiency
   c. Increasing paper usage
   d. Promoting fossil fuels

2. Green technology primarily aims to ....
   a. increase energy consumption
   b. pollute the environment
   c. reduce environmental impact
   d. disregard resource efficiency

3. Digital transformation helps organizations by ....
   a. reducing quality
   b. increasing waste
   c. enhancing decision-making
   d. limiting market access

4. What does precision farming combine with green technology?
   a. Manual labor
   b. Digital transformation
   c. Fossil fuels
   d. Paper documents

5. The "INSTAPAY" application is licensed by ....
   a. The Ministry of Finance
   b. Private Companies
   c. Central Bank of Egypt
   d. Egyptian Government

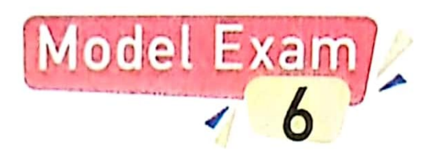
2 Put (✓) or (✗):

1. Digital transformation tools include workflow management and cybersecurity solutions. (   )
2. The use of electronic payment cards is slow and insecure. (   )
3. Renewable energy sources are part of green technology. (   )
4. The main goal of digital transformation is to increase costs. (   )
5. The "Digital Egypt" platform is designed to improve government efficiency. (   )

3 Complete the following sentences using the words between the brackets:

{Digital Egypt, Green technology, Efficiency, Electronic payment, Cybersecurity}

1. .... enhances government service efficiency.
2. .... focuses on reducing environmental impact.
3. .... is improved through digital transformation.
4. .... methods provide fast and secure transactions.
5. .... protects digital information and systems.



1 Choose the correct answer:

1. Solar panels are used to convert ....
   a. sunlight b. wind c. water d. heat
2. Which of these is NOT a tool for digital transformation?
   a. Workflow management tools b. Typewriters
   c. Electronic payment methods d. Virtual reality systems
3. The first step in installing a program from a CD is to............................
   a. click on "Uninstall" b. insert the CD
   c. download it online d. open Control Panel
4. The design and construction of buildings using eco-friendly energy is called............................
   a. smart home b. sensor technology
   c. green Building d. green technology

5 The main purpose of a primary key in a database table is to.....................

a. sort data alphabetically
b. uniquely identify each record
c. store images
d. generate reports

2 Put (✓) or (✗):

1 Removing unused programs increases storage space on the disk. (   )

2 Hydropower generates electricity by using water movement through dams. (   )

3 Email is one of the direct communication tools. (   )

4 Operating systems automatically detect and install drivers for new devices. (   )

5 Big Data refers to small, simple data sets that do not grow over time. (   )

3 Complete the following sentences using the words between the brackets:

(Geothermal energy – Google Meet – Spreadsheet – Uninstalling – E-learning platforms)

1 ....uses the Earth's internal heat to produce electricity.

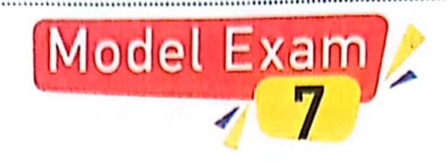
2 .... is a video conferencing service developed by Google.

3 .... consists of rows and columns.

4 .... a program removes all files of the program from your computer.

5 .... rely on cloud computing for accessing educational materials.





1 Choose the correct answer:

1. Which of the following is a benefit of digital transformation?
   a. Increasing waste
   b. Enhancing innovation
   c. Reducing quality
   d. Limiting market access
2. What is the purpose of the "Digital Egypt" platform?
   a. To promote social media usage
   b. To enhance government procedure efficiency
   c. To increase paper usage
   d. To limit online services
3. Which technology is commonly associated with green technology?
   a. Fossil fuels
   b. Coal power
   c. Renewable energy
   d. Nuclear energy
4. The "Google Meet" application is an example of ....
   a. document printing
   b. face-to-face communication
   c. energy consumption
   d. raw material procurement
5. How does digital transformation support sustainability?
   a. By increasing emissions
   b. By enhancing resource efficiency
   c. By depleting resources
   d. By discarding innovation

2 Put (✓) or (✗):

1. The main goal of green technology is to increase environmental pollution. ( )
2. Cloud computing provides digital services over the Internet. ( )
3. The "Digital Egypt" platform is unrelated to government services. ( )

4. Renewable energy sources are part of digital transformation tools. (   )
5. Electronic payment cards are known for being slow and insecure. (   )

3 Complete the following sentences using the words between the brackets:

{Innovation, Google Meet, Renewable energy, Government efficiency, Digital transformation}

1. .... is a key benefit of digital transformation.
2. .... is used for online face-to-face communication.
3. .... is a focus of green technology.
4. .... is enhanced by the "Digital Egypt" platform.
5. .... tools include workflow management and cybersecurity solutions.

Model Exam 8

1 Choose the correct answer:

1. Which of the following is a basic element in building databases?
   - a. Word processing
   - b. Spreadsheet
   - c. Presentation
   - d. Image editing
2. In Access, the field used to uniquely identify each record in a table is called the ....
   - a. Foreign Key
   - b. Primary Key
   - c. Data Field
   - d. AutoNumber
3. The term "Big Data" primarily deals with ....
   - a. small, simple data sets
   - b. unorganized paper records
   - c. large, complex data sets
   - d. manual processing

4 A database form is used for ....

a. browsing the internet
b. interacting with and entering data
c. playing games
d. printing documents

5 Which of the following applications is commonly used to create a database?

a. Microsoft Word
b. Microsoft PowerPoint
c. Microsoft Access
d. Microsoft Outlook

2 Put (✓) or (✗):

1 In a spreadsheet, each row represents a single record of data. ( )

2 The Datasheet View in Access allows you to view and edit table data. ( )

3 Big Data refers to small and simple data sets. ( )

4 The "Primary Key" in Access is used to uniquely identify each record in a table. ( )

5 A form in Access cannot be used to modify data. ( )

3 Complete the following sentences using the words between the brackets:

{Primary Key, spreadsheet, Big Data, Table Design, Access}

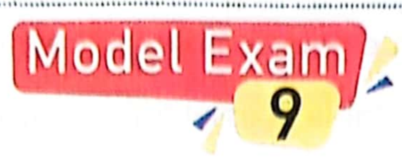
1 The .... is used to uniquely identify each record in a table.

2 A .... consists of rows and columns and is used to organize data.

3 .... refers to very large and complex data sets.

4 .... is a view in Access where you define the fields and data types.

5 .... is a program used to create and manage databases.



Model Exam 9

1 Choose the correct answer:

1. In Microsoft Access, what view allows you to define fields and data types for a table?
   a. Datasheet View b. Table Design View
   c. Form View d. Print Preview
2. Big Data is primarily concerned with ....
   a. Simple, small data sets b. Large, complex data sets
   c. Manual data processing d. Paper-based records
3. Smart buildings are an example of ....
   a. digital transformation only
   b. green technology only
   c. integrated digital transformation and green technology
   d. traditional construction methods
4. Which of the following is a function of the Primary Key in a database?
   a. To allow duplicate records
   b. To uniquely identify each record
   c. To organize records alphabetically
   d. To delete records automatically
5. Big data refere to very large sets of .... data
   a. structured b. unstructured
   c. semi-structured d. all of them

2 Put (✓) or (✗):

1. Smart buildings integrate both digital transformation and green technology. (   )
2. Big Data is manageable with basic computing tools. (   )
3. Table Design View in Access is used to enter data directly. (   )



4. Microsoft Access can create complex relational databases. ( )

5. The Primary Key in a table is essential for ensuring unique records. ( )

3 Complete the following sentences using the words between the brackets:

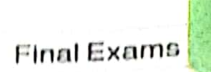
{Table Design, Smart buildings, Primary Key, Increasing algorithms, Big Data}

1. .... View in Access is used to define fields and data types for a table.
2. .... are an integration of digital transformation and green technology.
3. The .... ensures that each record in a table is unique.
4. The amount of data is .... rapidly due to the rapid development of digital technology such as AI.
5. .... involves handling large and complex data sets.



1 Choose the correct answer:

1. To create a new database in Microsoft Access, you should first ....
   a. open Microsoft Word
   b. start a new spreadsheet
   c. choose a blank desktop database
   d. write a report
2. Which of the following tools is used to extract data based on specific criteria in a database?
   a. Queries
   b. Forms
   c. Tables
   d. Reports



3 Google Meet allows participants to.........................

a. create documents
b. send emails
c. share screens
d. browse the web

4 The primary key in a database table.........................

a. uniquely identifies each record
b. sorts data alphabetically
c. stores text fields
d. formats the table

5 The Datasheet View in Microsoft Access is used to.........................

a. design the table structure
b. create charts
c. enter and view data
d. print documents

2 Put (✓) or (✗):

1 The Google Meet application can be downloaded from the Microsoft Store for Android devices. (   )

2 Microsoft Access is a tool used for creating and managing databases. (   )

3 In a database, the primary key can have duplicate values within the same table. (   )

4 During a Google Meet session, the "Raise Hand" feature helps in organizing the discussion. (   )

5 The "Query Design" view in Access allows you to enter multiple criteria for filtering data. (   )

3 Complete the following sentences using the words between the brackets:

(Primary key – Query Design – Cloud storage – Google Play Store – Datasheet View)

1 .... is used to download the Google Meet application on Android devices.

2 The .... uniquely identifies each record in a database table.

3 .... in Access provides greater control over query details.

4 .... services allow users to store files and folders online.

5 .... in Access is used for entering and viewing table data.

Model Exam 11

1 Choose the correct answer:

1 The concept of sensors in water faucets relies on......................
   a. automatically halting the water flow
   b. manually stopping the water flow
   c. detecting temperature changes
   d. enhancing water pressure

2 Smart transportation uses......................
   a. diesel cars
   b. electric vehicles
   c. gas cars
   d. none of them

3 Digital transformation primarily aims to......................
   a. enhance workflow
   b. reduce efficiency
   c. increase costs
   d. limit innovation

4 The primary purpose of cloud storage services is......................
   a. storing files online
   b. printing documents
   c. streaming videos
   d. browsing the web

5 Which of the following devices typically uses an embedded operating system?
   a. ATM
   b. Desktop computer
   c. Smartphone
   d. Smart TV

2 Put (✓) or (✗):

1 Geothermal energy relies on the Earth's internal heat to produce electricity. (   )

2 INSTAPAY is an app for electronic payments licensed by the Central Bank of Egypt. (   )

3 Microsoft Access is not suitable for managing large amounts of complex data. ( )

4 Cloud computing services can be accessed from anywhere with an internet connection. ( )

5 The "Digital Egypt" platform offers only social media services. ( )

3 Complete the following sentences using the words between the brackets:

(Big Data – green building – Cloud computing – Hydropower – operating system)

1 ....refers to very large and complex data sets that grow significantly over time.

2 The design and construction of buildings using eco-friendly energy-efficient materials is called ....

3 .... provides digital services over the Internet.

4 ....generates electricity by using water movement through dams.

5 An .... is essential for managing hardware and software components in electronic devices.

Model Exam 12

1 Choose the correct answer:

1 What is the primary goal of green technology?

a. Increase pollution

b. Enhance environmental sustainability

c. Maximize resource waste

d. Increase reliance on fossil fuels

2 The "INSTAPAY" application is used for ....

a. video conferencing

b. electronic payments

c. document printing

d. online shopping

3 Which of the following is an example of digital transformation?

a. Using paper records
b. Manual labor
c. Cloud computing
d. Fossil fuel consumption

4 How does digital transformation impact decision-making?

a. Decreases access to data
b. Increases errors
c. Enhances decision-making by providing timely data ☒
d. Limits analysis options

5 Which of the following tools is related to workflow management?

a. Email
b. Cloud storage
c. Cybersecurity
d. Digital Egypt platform

2 Put (✓) or (✗):

1 Digital transformation increases the complexity of data management. (   )

2 Green technology aims to reduce resource consumption. (   )

3 Electronic payment cards are unreliable and slow. (   )

4 Precision farming does not involve any digital technology. (   )

5 Renewable energy is a key component of green technology. (   )

3 Complete the following sentences using the words between the brackets:

{Cloud computing - Digital transformation - Sustainability - Renewable energy - Electronic payments}

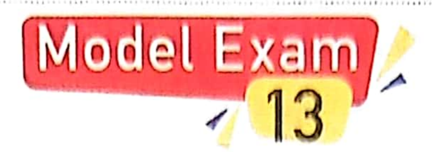
1 .... allows data storage and services over the Internet.

2 .... enhances efficiency and innovation in businesses.

3 .... focuses on reducing resource waste and environmental impact.

4 .... is central to green technology initiatives.

5 .... are fast, secure, and convenient methods of transaction.



1 Choose the correct answer:

1. Which program is more suitable for creating and managing complex databases?
   - a. Microsoft Word
   - b. Microsoft Excel
   - c. Microsoft Access
   - d. Notepad
2. The term "Big Data" refers to ....
   - a. small, simple data sets
   - b. structured data only
   - c. very large and complex data sets
   - d. paper records
3. The "Google Meet" application is an example of ....
   - a. document printing
   - b. face-to-face communication
   - c. energy consumption
   - d. raw material procurement
4. What is required to access the "Digital Egypt" platform?
   - a. Postal address
   - b. Email address
   - c. Telephone number
   - d. Bank account
5. Smart TVs typically run on operating systems like ....
   - a. Windows and Linux
   - b. Android TV and Tizen
   - c. macOS and iOS
   - d. Unix and DOS

2 Put (✓) or (✗):

1. Digital transformation increases the complexity of data management. (   )
2. The Datasheet View in Access is used for entering and viewing table data. (   )
3. Wearable devices like smartwatches do not require an operating system. (   )

4. The startup screen of an operating system is the same across all versions. ( )

5. Operating systems automatically detect and install drivers for new devices. ( )

3 Complete the following sentences using the words between the brackets:

{Cloud storage service - Digital transformation - Smart TVs - Google Meet - Complex databases}

1. .... is used for storing files and folders over the internet.
2. .... involves integrating digital technology into all aspects of business.
3. .... operate on systems like Android TV and Tizen.
4. .... is a video conferencing service developed by Google.
5. .... can be efficiently managed using Microsoft Access.

Model Exam 14

1 Choose the correct answer:

1. In a database, the Criteria row in a query is used to........................
   a. sort data alphabetically
   b. set specific conditions for the query
   c. create new tables
   d. format text

2. To create a form in Microsoft Access, you need to........................
   a. open Excel
   b. select a table in the Navigation Pane
   c. install new software
   d. write a report

3 During a Google Meet session, the "Stop Sharing" option is used to....

a. mute the microphone
b. end screen sharing
c. leave the meeting
d. start a new meeting

4 Which of the following is a primary use of a spreadsheet?

a. Sending emails
b. Browsing the web
c. Organizing data in rows and columns
d. Printing documents

5 The Design View in Microsoft Access is primarily used for........................

a. creating and modifying table structures
b. viewing table data
c. sorting records
d. generating reports

2 Put (✓) or (✗):

1 Forms in Microsoft Access can only be used to view data, not to modify it. (   )

2 The "Criteria row" in a query allows you to set specific conditions for filtering data in a database. (   )

3 In Google Meet, the "Raise Hand" feature is used to end the meeting. (   )

4 A spreadsheet consists of rows and columns where data can be organized and analyzed. (   )

5 The Design View in Access is used to directly enter data into the table. (   )

3 Complete the following sentences using the words between the brackets:

(Forms – Stop sharing – Primary key – spreadsheet – Query Design)

1 .... in a database provide a user-friendly interface for data entry and modification.



2. .... option in Google Meet is used to end screen sharing during a meeting.

3. The .... ensures that each record in a database table is uniquely identified.

4. A .... organizes data into rows and columns for easy analysis.

5. .... in Access allows you to specify criteria for retrieving specific data from a database.

Model Exam 15

1 Choose the correct answer:

1. Which of these is a common characteristic shared by green technology and digital transformation?
   a. Enhancing resource efficiency
   b. Increasing resource waste
   c. Slowing down innovation
   d. Raising the costs of services

2. Smart buildings integrate green technology with.....................
   a. outdated technology
   b. traditional infrastructure
   c. digital transformation
   d. fossil fuels

3. Email is primarily used to.....................
   a. store files
   b. send and receive messages
   c. play games
   d. browse websites

4. The operating system desktop screen includes.....................
   a. icons and bars
   b. videos and games
   c. only text
   d. website links

5. Precision farming integrates.....................
   a. manual labor
   b. digital transformation
   c. fossil fuels
   d. paper documents

2 Put (✓) or (✗):

1 Smart TVs operate on operating systems like Android TV and Tizen. (   )

2 Digital transformation tools do not include electronic payment methods. (   )

3 Green technology does not focus on reducing environmental impact. (   )

4 Collaboration tools like Zoom and Google Meet are used for face-to-face communication. (   )

5 Water treatment in green technology includes purifying contaminated water for reuse. (   )

3 Complete the following sentences using the words between the brackets:

(Control Panel – Solar energy – Email – Cloud computing – Workflow management tools)

1 .... is used to uninstall programs or install new devices on a computer.

2 .... u[illegible] [illegible]'a[illegible] panels to generate electricity.

3 .... is a digital communication system used to send and receive messages.

4 .... reduces the need for high-specification hardware by providing digital services over the Internet.

5 .... enhance the efficiency of repetitive tasks in digital transformation.

Model Answers



Chapter 1

Lesson 1

1
1 d 2 b 3 b 4 b
5 d 6 a 7 c 8 b
9 c 10 c 11 b 12 a
13 a 14 c 15 d 16 d
17 b 18 d

2
1 ✓ 2 ✗ 3 ✓ 4 ✗
5 ✓ 6 ✓ 7 ✓ 8 ✓
9 ✗ 10 ✓ 11 ✗ 12 ✗
13 ✓ 14 ✗ 15 ✓ 16 ✗
17 ✗ 18 ✗ 19 ✗ 20 ✓

3
1 Sensors 2 Hydropower
3 Smart transportation
4 Bioenergy
5 Green Building

Lesson 2

1
1 a 2 b 3 c 4 b
5 c 6 a 7 b 8 c
9 c 10 d 11 d 12 b
13 c 14 d 15 b 16 c
17 b 18 c 19 b 20 b
21 c 22 d 23 b

2
1 ✓ 2 ✗ 3 ✓ 4 ✗
5 ✓ 6 ✗ 7 ✓ 8 ✗
9 ✗ 10 ✓ 11 ✓ 12 ✗
13 ✓ 14 ✗ 15 ✓ 16 ✓
17 ✗ 18 ✓ 19 ✓ 20 ✗
21 ✓ 22 ✓

3
1 a 2 d 3 c 4 b 5 e

Test Yourself on Lessons 1&2

1
1 b 2 a 3 b 4 d
5 d 6 c 7 c

2
1 ✗ 2 ✗ 3 ✓ 4 ✗
5 ✓ 6 ✗ 7 ✓ 8 ✓

Lesson 3

1
1 b 2 d 3 a 4 b
5 a 6 c 7 d 8 b
9 a 10 c 11 c 12 a
13 a 14 c 15 d 16 c
17 d

2
1 ✓ 2 ✗ 3 ✗ 4 ✓
5 ✓ 6 ✓ 7 ✓ 8 ✗
9 ✓ 10 ✓ 11 ✓ 12 ✓
13 ✗ 14 ✗ 15 ✓ 16 ✓
17 ✗

3
1 Linux
2 Operating System
3 automotive systems
4 Embeded System
5 Wearable devices

Lesson 4

1
1 b 2 c 3 d 4 b
5 b 6 d 7 b 8 b
9 b 10 b 11 b 12 b
13 a 14 c 15 c 16 b
17 b 18 c 19 a 20 a
21 b

2
1 ✓ 2 ✓ 3 ✓ 4 ✓
5 ✓ 6 ✗ 7 ✓ 8 ✓
9 ✗ 10 ✓ 11 ✓ 12 ✗
13 ✓ 14 ✓ 15 ✗ 16 ✓
17 ✓ 18 ✗ 19 ✓

3
1. drivers
2. storage space
3. Uninstalling a program
4. Control Panel
5. setup.exe

4 – 5 – 6 – 7 – 8 – 9 – 10

Answer by yourself

Test Yourself On Lessons 3&4

1
1. c 2. b 3. c 4. a
5. a 6. b 7. b

2
1. ✓ 2. ✓ 3. ✗ 4. ✓
5. ✗ 6. ✓ 7. ✗ 8. ✗

October Exam On Lessons 1–4

1
1. c 2. c 3. b 4. b
5. c 6. d 7. d

2
1. ✗ 2. ✓ 3. ✗ 4. ✓
5. ✓ 6. ✗ 7. ✓ 8. ✓

Lesson 5

1
1. b 2. d 3. c 4. b
5. c 6. a 7. a 8. b
9. a 10. d 11. b 12. c
13. d 14. a 15. b 16. b
17. b 18. b 19. c 20. d

2
1. ✓ 2. ✗ 3. ✗ 4. ✓
5. ✗ 6. ✓ 7. ✓ 8. ✗
9. ✓ 10. ✗ 11. ✓ 12. ✗
13. ✓ 14. ✗ 15. ✓ 16. ✗
17. ✓ 18. ✗

3 Answer by yourself

4
1. speed- ease- diversity- reliability
2. hacking – spam- fraud-viruses
3. Gmail - Yahoo Mail - Hotmail/ Outlook
4. user name - password
5. ceate my personal account

Lesson 6

1
1. b 2. d 3. a 4. b
5. c 6. a 7. b 8. b
9. a 10. d 11. a 12. c
13. c 14. b 15. c 16. c
17. d 18. c 19. c 20. b
21. b

2
1. ✓ 2. ✓ 3. ✓ 4. ✗
5. ✓ 6. ✗ 7. ✓ 8. ✗
9. ✓ 10. ✗ 11. ✓ 12. ✗
13. ✓ 14. ✗ 15. ✗ 16. ✓
17. ✓ 18. ✓

3
1. messaging applications
2. e-learning platforms
3. Cloud storage service
4. an internet connection
5. cloud backup services

4 – 5 – 6 Answer by yourself

Test Yourself On Lessons 5&6

1
1. c 2. b 3. b 4. c
5. d 6. b 7. c 8. b

2
1. ✓ 2. ✗ 3. ✗ 4. ✗
5. ✓ 6. ✗ 7. ✓



Lesson 7

1
1 d 2 b 3 c 4 c
5 b 6 b 7 b 8 a
9 b 10 b 11 b 12 b
13 b 14 c 15 a 16 c
17 b 18 b 19 c 20 a

2
1 ✓ 2 ✗ 3 ✓ 4 ✓
5 ✗ 6 ✗ 7 ✓ 8 ✓
9 ✗ 10 ✓ 11 ✓ 12 ✗
13 ✗ 14 ✓ 15 ✓ 16 ✗
17 ✓

3
1 Stop sharing
2 In-call messages
3 Google Meet
4 Google Meet link 5 Hand icon

Lesson 8

1
1 b 2 c 3 b 4 b
5 c 6 d 7 a 8 c
9 d 10 a 11 c 12 b
13 c 14 a 15 b 16 d
17 d 18 b

2
1 ✗ 2 ✓ 3 ✗ 4 ✓
5 ✓ 6 ✓ 7 ✓ 8 ✗
9 ✗ 10 ✗ 11 ✓ 12 ✓
13 ✗ 14 ✓ 15 ✓ 16 ✓
17 ✗ 18 ✓ 19 ✓ 20 ✓
21 ✓ 22 ✗

3
1 AI – IOT 2 rows-columns
3 row 4 columns
5 primary key

Test Yourself On Lessons 7&8

1
1 b 2 b 3 b 4 c
5 b 6 c 7 b

2
1 ✓ 2 ✗ 3 ✗ 4 ✓
5 ✓ 6 ✓ 7 ✓ 8 ✓

November Exam On Lessons 5–8

1
1 b 2 b 3 b 4 a
5 b 6 c 7 c

2
1 ✗ 2 ✗ 3 ✓ 4 ✗
5 ✓ 6 ✓ 7 ✗ 8 ✗

Lesson 9

1
1 b 2 d 3 b 4 d
5 b 6 a 7 d 8 a
9 b 10 b 11 b 12 a
13 c 14 b 15 b 16 b

2
1 ✓ 2 ✓ 3 ✓ 4 ✗
5 ✓ 6 ✓ 7 ✓ 8 ✗
9 ✗ 10 ✗ 11 ✓ 12 ✗
13 ✗ 14 ✗ 15 ✗ 16 ✗
17 ✓

3
1 c 2 a 3 d 4 b 5 e

4
1 spreadsheet – form
2 data source table – query design grid
3 drag and drop
4 appear
5 design view



Model Exam 1

1. ① c ② b ③ c ④ d ⑤ b
2. ① ✓ ② ✗ ③ ✗ ④ ✓ ⑤ ✗
3. ① email address
   ② Workflow management
   ③ Renewable energy
   ④ Sustainability
   ⑤ operating System

Model Exam 2

1. ① a ② b ③ b ④ b ⑤ a
2. ① ✗ ② ✓ ③ ✓ ④ ✗ ⑤ ✗
3. ① drivers ② storage space
   ③ Uninstalling ④ Control Panel
   ⑤ SETUP.EXE.

Model Exam 3

1. ① a ② d ③ a ④ a ⑤ a
2. ① ✓ ② ✗ ③ ✗ ④ ✓ ⑤ ✓
3. ① Green technology
   ② Coal ③ Control Panel
   ④ internet ⑤ Primary Key

Model Exam 4

1. ① b ② b ③ a ④ b ⑤ b
2. ① ✗ ② ✗ ③ ✗ ④ ✓ ⑤ ✓
3. ① Cloud computing
   ② Control Panel
   ③ LPT1 ④ Google Docs
   ⑤ Uninstalling

Model Exam 5

1. ① b ② c ③ c ④ b ⑤ c
2. ① ✓ ② ✗ ③ ✓ ④ ✗ ⑤ ✓
3. ① Digital Egypt
   ② Green technology
   ③ Efficiency
   ④ Electronic payment
   ⑤ Cybersecurity

Model Exam 6

1. ① a ② b ③ b ④ c ⑤ b
2. ① ✓ ② ✓ ③ ✗ ④ ✓ ⑤ ✗
3. ① Geothermal energy
   ② Google Meet
   ③ Spreadsheet ④ Uninstalling
   ⑤ E-learning platforms

Model Exam 7

1. ① b ② b ③ c ④ b ⑤ b
2. ① ✗ ② ✓ ③ ✗ ④ ✓ ⑤ ✗
3. ① Innovation
   ② Google Meet
   ③ Renewable energy
   ④ Government efficiency
   ⑤ Digital transformation

Model Exam 8

1. ① b ② b ③ c ④ b ⑤ c
2. ① ✓ ② ✓ ③ ✗ ④ ✓ ⑤ ✗
3. ① Primary Key ② spreadsheet
   ③ Big Data ④ Table Design
   ⑤ Access

Model Exam 9

1. ① b ② b ③ c ④ b ⑤ d
2. ① ✓ ② ✗ ③ ✗ ④ ✓ ⑤ ✓
3. ① Table Design ② Smart buildings
   ③ Primary Key
   ④ Advanced algorithms
   ⑤ Big data

Model Exam 10

1. ① c ② a ③ c ④ a ⑤ c
2. ① ✗ ② ✓ ③ ✗ ④ ✓ ⑤ ✓
3. ① Google Play Store
   ② Primary key ③ Query Design
   ④ Cloud storage
   ⑤ Datasheet View

Model Exam 11

1. ① a ② b ③ a ④ a ⑤ a
2. ① ✓ ② ✓ ③ ✗ ④ ✓ ⑤ ✗
3. ① Big Data ② green Building
   ③ Cloud computing
   ④ Hydropower ⑤ operating System

Model Exam 12

1. ① b ② b ③ c ④ c ⑤ d
2. ① ✗ ② ✓ ③ ✗ ④ ✗ ⑤ ✓
3. ① Cloud computing
   ② Digital transformation
   ③ Sustainability
   ④ Renewable energy
   ⑤ Electronic payments

Model Exam 13

1. ① c ② c ③ b ④ b ⑤ b
2. ① ✗ ② ✓ ③ ✗ ④ ✗ ⑤ ✓
3. ① Cloud storage service
   ② Digital transformation
   ③ Smart TVs
   ④ Google Meet
   ⑤ Complex databases

Model Exam 14

1. ① b ② b ③ b ④ c ⑤ a
2. ① ✗ ② ✓ ③ ✗ ④ ✓ ⑤ ✗
3. ① Forms
   ② Stop sharing
   ③ Primary key
   ④ Spreadsheet
   ⑤ Query Design

Model Exam 15

1. ① a ② c ③ b ④ a ⑤ b
2. ① ✓ ② ✗ ③ ✗ ④ ✓ ⑤ ✓
3. ① Control Panel
   ② Solar energy
   ③ Email
   ④ Cloud computing
   ⑤ Workflow management tools